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AN ENDURING MONUMENT to America's Land Grant Colleges has been created at the Pennsylvania State College in the notable fresco painted there last summer by Henry Varnum Poor, distinguished American muralist. The work covers a wall area of 275 square feet in the foyer of Old Main building.

Drawing its narrative detail from the early background of Penn State, which was one of the first of the Land Grant Colleges, the mural in its broader theme depicts the whole underlying philosophy of the Morrill Land Grant Act, which was to establish institutions in each state where "the leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts."

A nine-foot figure of President Lincoln, who signed the Land Grant Act on July 2, 1862, dominates the center of the mural, his somber face reflecting the trials of the Civil War then in progress. The student at his side holds a tree suggesting the promise of future growth and rich return from this new type of education. At opposite ends of the mural are scenes from Pennsylvania's agricultural and industrial life, to whose enrichment the college was dedicated.

Financed by a memorial fund from Penn State's class of 1932, the mural was started last April 26 and completed on June 18, after months of preliminary study by the artist.

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THE UNIVERSITY OF NEW HAMPSHIRE PLAN FOR FRESHMAN ENGLISH

HAROLD H. SCUDDER

IN SEPTEMBER, 1939, the University of New Hampshire abandoned its orthodox Freshman English composition course and substituted a system of tutoring, confining its attention to those Freshmen actually in need of help. Now that returns are available covering the achievement of the first year under the new program those in charge feel the abandonment of the time-honored Freshman course has been completely justified. At the end of the college year, but thirty of a class of approximately 600 Freshmen were still retained for further instruction, and the general faculty has no adverse criticism to offer of the work of any of those who have been released. This article will attempt to explain how Freshman English has been taught at New Hampshire in the past, how it is taught now, and the reasons for the change which has been made.

For many years New Hampshire has required of all its Freshmen the usual course in English composition. Varying in detail from time to time, this course has included instruction in the fundamentals of good English usage, followed by a consideration of exposition, description, argumentation, and narration, and it has been accompanied by the required reading of a selected list of books. Although the

course was conscientiously taught, and well taught, it failed to achieve what it was set up to accomplish. Many of our students after taking it and passing it creditably, did not, or could not write and speak English well, or even correctly; and as no other English work was required of them, they were eventually graduated still illiterate. Complaints from members of the faculty were frequently voiced as to the shortcomings of such students. Yet there were others who passed the Freshman course, and who did write and speak well, and continued to do so all through their four years. That the course succeeded with some and did not with others was obvious enough, but the reasons for this lack of uniformity were not so clear.

One of the probable causes lay in the heterogeneity of the class membership. In general, New Hampshire Freshmen are a selected group, taken from the upper portions of the graduating classes of the high schools of the state, but excellence in other subjects even though accompanied by an indifferent record in English can and does earn for a candidate the entrance certificate which is based on his general average. In addition, many of our students come from families of comparatively recent foreign derivation, and in general they represent a great variety of social backgrounds. That the grade and secondary school teacher working with so diversified a group had failed to turn out a uniformly equipped product in English usage at the end of the high school course is hardly to be wondered at.

If our Freshman course was failing in its turn to reduce to a reasonably uniform competence these widely varying varieties of incompetence, the question constantly arose, could it be altered to increase its efficiency, and if so how? The suggestion which finally determined our action came from Dr. Alvin C. Eurich of Stanford University who, here on a visit, in reply to a chance question as to what he thought of college Freshman English as taught generally throughout the United States, said that if he had his way he would abolish the course. Pressed for an explanation he went on to say that the Freshman course had been over-organized, that it was no longer a course for the preparation of defective freshmen but had become one of the several obstacles set between the student and his degree, which the student, bent on his own individual interests, clambered over and forgot as soon as possible.

There was, plainly, truth here. The members of the average Freshman staff, bored with the drudgery of drilling in fundamentals, seek naturally to lighten their burden by introducing other features into

the Freshman course from time to time, and are gratified at the eager response with which many of their students respond to the broadened offerings. But in so doing they are making a new *college* course, and are forgetting that their real task is to prepare *unprepared* Freshmen to do college work in English, or in any other subject in which reading and writing English may be essential. Those who respond to the new offerings do not need *Freshman* English, and those who do not respond are not ready yet for more advanced work. They *do* need Freshman English.

Following this reasoning, it was decided to drop the Freshman course entirely, and to substitute a program of tutorial instruction; to confine this tutorial instruction to those who really needed it; and to release all others. These others were those who already knew all that a bona fide Freshman course had been planned to teach. They could read and write English fluently, and with reasonable correctness. They were those who were ready to go on further in the study of English if they cared to do so, and one of the three colleges of which the University of New Hampshire is composed required a second year of English. It was further decided that at any time in his entire four years at college any student who should be released from tutorial instruction could be sent back for more of it at the request of any of his instructors who found his English to be unsatisfactory. This provision was aimed at the backslider who could write well and did so in his Freshman English course but who after passing it relapsed into a shirt-sleeve jargon in all of his other subjects.

The device used to separate the competent from the incompetent among the members of the incoming class was the Co-operative English test. Each Freshman took this test and the upper half of the class thus established was then and there released from Freshman English. Those so released were at liberty to take no English at all; a survey course in English literature; or a new course, especially planned for Freshmen, called *Reading for Thought*. This last retained much of the material in the discarded Freshman course, and added new features. It should be emphasized that these two optional English courses were *elective* for released Freshmen, and not required. So many took the *Reading for Thought* course that eight sections are being provided for the first semester of 1940-1941, and there were many enrolled in the Survey course. Any of these released students could be recalled and assigned to tutorial groups at any time upon complaint of any member of the faculty, and in the ensuing months some of them were. They

may, indeed, be recalled at any time throughout their entire college course.

In the meantime the lower half of the class was organized into a series of tutorial groups, averaging 16 to the group. These were turned over to the Freshman staff of instructors. No instructor had more than four groups, and each instructor had some other course to teach to give him the relief of variety. In many ways, however, his tutorial work was varied enough. Each instructor had the personal history of each of his students, he knew what his capacities were, and went to work upon the individual problem. His task was to find what the student did not know, and to teach it to him as speedily as possible. He could use what text he saw fit, or none; he could handle the case in any way which gave promise of results; and as soon as his student was able to write, read, and speak correctly, his student was released. In some cases such students were recalled, but in general, once released, they stayed released. Broadly, by the end of the year the incompetent students had been brought to about that state of efficiency which the competent students had reached at the opening of the year, and in the meantime the competent students had made some further progress themselves.

These facts were definitely ascertained by giving the entire class in June the same examination that it had been given in the preceding September, and by then making an elaborate and careful study of the data thus obtained. These results for a homogeneous sample of 100 students are set forth in the appended tables.

The new system is based on the assumption that the usual Freshman course which is required of all is required of many (about half of those compelled to take it) who do not need it. It is for them a waste of time and a bore. To ameliorate such conditions for the good students, various items are usually added, which though of unquestioned value, render the whole program quite beyond the range of the unprepared Freshman, the very person for whose particular assistance the program was designed in the first place. Under the new system the student who is prepared to take college English courses is permitted to do so at once, and those who are not prepared are tutored until they are ready. These cases vary materially from individual to individual, and each man gets what he needs when he needs it. He cannot be graduated until he is released from tutorial instruction.

A writing laboratory has been provided where the class papers are written and where an instructor is always stationed to render such

assistance as may be asked for, or which seems wise to give; and a small library of reference books is assembled there. The student meets his tutor at any hour in the day, each schedule being made individually, with the student's other courses in mind. The instructor has about the same burden he had with the normal allotment of Freshman sections, but under the new plan the instructor knows always just what he is confronted with, and he varies his instruction to fit the case.

A special effort has been made to improve the oral English of the members of the incoming class. Each student took a voice test upon entrance, and all the manifest defectives were gathered into a special oral English group. Others, less seriously handicapped, were sent by their regular tutors from time to time to the two special instructors who handled the oral English work. The entire class was re-examined in June, employing the same test used in September, and it will be tested again at the end of the sophomore and senior years. A brief special study of the achievement of the first hundred students (selected alphabetically) has been made by William J. E. Crissy, of the University of New Hampshire Department of Education, and a more complete evaluation of the data will be made with such factors controlled as curriculum pursued, and the effect of general aptitude in language upon the English test scores of the students.

The Co-operative English Test was administered to all entering freshmen at the University of New Hampshire in the fall of 1939. The class was retested toward the close of the college year with the same test. The scores from a sample of the class (the first hundred students listed alphabetically) were analyzed for the purpose of evaluating the changes that had taken place in English achievement through the tutorial Freshman English program in the case of those students required to take such training, and also to see what incidental gains in English achievement had been made by those students excused from the tutorial work.

Table I presents a summary of the fall and spring English test results for the hundred students considered in the experimental study. The "f" subscript indicates the fall results, the "s" subscript the spring results. The entries in the first row of the table are the mean or average scores made by the group on the total test, and on each of the three parts when they were tested in the fall. The fourth row entries are the mean scores made when the test was re-administered in the spring. Rows two and five give standard deviations for the

group on the total test, and on the three parts. These are indicative of the dispersion of the scores of the group. Rows three and six contain standard deviations of the means; these measures indicate the fluctuation that may be expected in the means due to sampling

TABLE I

A Comparison of the Fall and Spring English Achievement of 100 Freshmen

	Total Score	Eng. Usage	Spelling	Vocabulary
1—Mean$_f$	170.50	110.83	20.43	42.49
2—S. D.$_f$	50.18	28.19	9.95	19.45
3—S. D. M.$_f$	5.02	2.82	1.00	1.95
4—Mean$_s$	221.65	134.78	28.29	58.93
5—S. D.$_s$	39.71	21.29	8.24	16.90
6—S. D. M.$_s$	3.97	2.13	.82	1.69
7—Dif. M.$_{fs}$	51.15	23.95	7.86	16.44
8—r_{fs}	.69	.65	.63	.75
9—S. D. D.$_{mfs}$	5.22	2.93	1.08	2.05
10—C. R.	9.80	8.17	7.28	8.02

errors. Row seven contains the differences between the two means on the total test, and on each part of the test. Thus it will be noted that there was a gain of 51.15 points between fall and spring on the total test. The entries in row ten are the differences between the means evaluated in terms of the errors indicated in rows three and

TABLE II

A Comparison of the Fall and Spring Total English Test Scores of the Exempted Group and the Tutorial Group

	Exempted Group (N 58)	Tutorial Group (N 42)
1—Mean$_f$	206.30	126.72
2—S. D.$_f$	35.11	29.74
3—S. D. M.$_f$	4.61	4.59
4—Mean$_s$	242.86	189.31
5—S. D.$_s$	25.34	36.89
6—S. D. M.$_s$	3.33	5.69
7—Dif. M.$_{fs}$	36.56	62.59
8—r_{fs}	.67	.50
9—S. D. D.$_{mfs}$	4.70	6.35
10—C. R.	7.78	9.86

six. In other words, row ten contains the differences evaluated on a common scale. We may interpret these entries by saying that the most significant gain was made in English usage, and the least significant gain was made in spelling. The entries in row eight are correlation

coefficients; the entries in row nine are standard deviations of the differences between the means. The entries in both these rows are utilized in obtaining the common scale differences of row ten previously referred to.

TABLE III

A Comparison of the Fall and Spring English Usage Scores of the Exempted Group and Tutorial Group

	Exempted Group (N 58)	Tutorial Group (N 42)
1—Mean$_f$	128.21	87.67
2—S. D.$_f$	17.56	21.00
3—S. D. M.$_f$	2.31	3.24
4—Mean$_s$	145.88	117.17
5—S. D.$_s$	12.49	19.12
6—S. D. M.$_s$	1.64	2.95
7—Dif. M.$_{fs}$	17.67	29.50
8—r_{fs}	.46	.65
9—S. D. D.$_{mfs}$	2.51	3.60
10—C. R.	7.04	8.19

In Tables II, III, IV, and V a comparison is made between the exempted group and the tutorial group. It will be noted from Table II, row seven, that the exempted group gained less than the tutorial group on the total test (36.56 vs. 62.59). The entries in row ten

TABLE IV

A Comparison of the Fall and Spring Spelling Scores of the Exempted Group and Tutorial Group

	Exempted Group (N 58)	Tutorial Group (N 42)
1—Mean$_f$	25.20	13.86
2—S. D.$_f$	8.68	7.53
3—S. D. M.$_f$	1.14	1.16
4—Mean$_s$	30.41	25.00
5—S. D.$_s$	6.75	9.14
6—S. D. M.$_s$	.89	1.41
7—Dif. M.$_{fs}$	5.21	11.14
8—r_{fs}	.66	.53
9—S. D. D.$_{mfs}$	1.19	1.57
10—C. R.	4.38	7.10

indicate that when these differences are put on a common scale the tutorial group still shows a superiority in gain over the exempted group on the total test.

Interpreting Tables III, IV, and V in the same way we find that

the tutorial group make a gain superior to that of the exempted group in English usage, spelling, and vocabulary. The sharpest contrast in gains is found on spelling (note Table IV, row ten). The tutorial group at the end of the year had an average spelling score approximately equal to average spelling score made by the exempted group at the beginning of the year. On other parts of the test the gains of the tutorial group, while great, did not attain to the initial average scores of the exempted group.

TABLE V

A Comparison of the Fall and Spring Vocabulary Scores of the Exempted Group and Tutorial Group

	Exempted Group (N 58)	Tutorial Group (N 42)
1—Mean$_f$	54.07	27.95
2—S. D.$_f$	17.07	9.80
3—S. D. M.$_f$	2.24	1.51
4—Mean$_s$	66.90	47.90
5—S. D.$_s$	14.63	15.87
6—S. D. M.$_s$	1.92	2.45
7—Dif. M.$_{fs}$	12.83	19.95
8—r_{fs}	.67	.30
9—S. D. D.$_{mfs}$	2.41	2.68
10—C. R.	5.32	7.44

While this analysis is admittedly limited in scope there seems to be sufficient evidence of the value of the tutorial program for the entering freshman with deficient English training to warrant a continuance of this plan of teaching. Likewise, this first analysis lends substantiation to the premise that some knowledge of English is gained incidental to a college education even when no course taken by the students contains deliberate teaching of such basic English as English usage, spelling and vocabulary.

—*Volume 16, Number 2*

CHARACTERISTICS OF SUCCESSFUL DENTAL STUDENTS[1]

J. Ben Robinson and Roger M. Bellows

The student personnel worker who is responsible for selection desires to admit the "good" applicants on the basis of characteristics which are related to success. The major problems involved include definition of success, isolation of characteristics associated with it, and techniques for the identification of those among the group applying who possess these traits. The writers have been engaged in an investigation dealing with these problems as related to personnel work in a dental school and one sample of dental students has been tested and followed up through the sophomore year, another sample through the freshman year, and information pertaining to dental aptitude has been obtained on a third sample. It is the purpose of this article to summarize these findings—the report comprises a preliminary analysis of criteria of success, selection of trial predictors of success, relation of predictors to criteria, and a discussion of the measurable traits required for proficiency in the first two years of dental school training.

CRITERIA OF DENTAL SCHOOL SUCCESS

Three general approaches to definition of dental school success are feasible. All three approaches make use of grades earned by the students in courses as the basic data for definition of levels of performance. While the general fallibility of this basis for evaluation of "goodness" of performance is well recognized, it is the only basis available[2] and is the one universally used in the practical situation, and for these reasons it was adopted here. The first approach consists

[1] The writers are indebted to O. L. Endler, L. Kolby Burk and others for valuable contribution to data analysis methods and for many of the computations. Tests for the entire study were administered by G. W. Gaver. Predictor data pertaining to quality, quantity and pattern of pre-dental work of the subjects were assembled by Alma H. Preinkert.

[2] Another possible basis is, however, instructors' estimates of probable success in the dental office situation. Trial of this procedure is reported by Roe, A. M. and Brown, C. F. "Qualifications for dentistry: preliminary study." *Personnel Journal,* 1927, 6, 176-181. These investigators found such estimates regarding promise of 50 senior dental students to correlate .78 with composite grades.

of employing a single composite criterion such as average of numerical grades in all courses; another is the use of multiple criteria or the use of grades in all courses in dental school taken separately; the third approach consists of common course groupings, or classifying the courses into two or more classes on the basis of similarity in their requirements for success.

The first approach has the obvious advantage of simplicity in use. It is the one commonly used at the present time. Its exclusive use would considerably simplify the problem of evaluation of students provided it is of sufficient value; also the analysis of results pertaining to the characteristics associated with success would be simplified. Unfortunately, however, the courses in dental school are quite different—it will be shown that some require academic aptitude similar to that needed for distinction in pre-dental courses, while others require a different kind of aptitude, which has been called manipulative or technical by dental school instructors. On the other hand it may be argued that, if it can be shown that a composite criterion can be predicted to an acceptable degree, or if variates can be isolated which are appreciably and significantly related to the single composite, then it could be adopted for use in analyzing the characteristics that contribute to success, and its use in the practical evaluation of students is justified.

The second approach has the advantage of taking fully into account the differences between various courses. It makes necessary, however, rather unwieldy interpretations since these must be made for each separate course. Exclusive use of the second approach would not eventually produce workable definitions of requirements necessary for success because a number of characteristics would have to be considered in relation to too large a number of separate courses.

The third approach consists of grouping into roughly equivalent classes on the basis of common requirements for success. This has the advantage of simplicity and also takes into account differences in the courses; it does not possess the disadvantages of the other two approaches.

At the present time several methods are being employed to study the separate criteria in order eventually to group them. The results obtained from the use of the several methods are being compared with a view to possible recommendation for practical use after the two samples have been followed through the entire dental school curriculum. The methods consist of the paired comparison rating

technique by which the various courses are rated by student judges, factor analysis of the matrices of the criteria, and correlations with tests which are alleged to measure specific characteristics.

While it is not feasible at the present time to group the various criteria thus far studied into rigid classes, results of the analysis of criteria obtained up to the present (grades in courses in the first two years of dental school) have suggested the feasibility of ranking the separate criteria of proficiency in the various courses in terms of the judged amount of manipulative or technical aptitude required. The paired comparisons method was used to obtain the ranks.

This method consisted of pairing each course with all of the other courses for each year, and having groups of students underline that member of each pair that they judged to require more manipulative ability, as compared to scholastic ability. Manipulative ability was defined as "technical ability and finger dexterity or proficiency in manipulating small objects with the fingers." Scholastic ability was defined as "theoretical ability or facility in working with words and numbers, and skill in studying and understanding textbooks and lecture notes." Instructions to the raters included the following: "Each of the . . . courses has been paired with all of the other courses. For each pair you are requested to compare the two and *underline* the name of that course which requires more manipulative ability." Ratings with these instructions were obtained from 48 students for the freshman courses, and from 61 students for the sophomore courses.

The seven freshman courses and nine of the ten[3] sophomore courses are listed in Table I. They are ranked in terms of the per cent of times they were underlined in the paired comparisons, that is, on the basis of the comparative amount of manipulative ability they were judged to require. A column headed "per cent" is included in the table. Opposite each course the per cent of times each course was underlined is indicated. Each of the 48 students had an opportunity to underline the name of each freshman course six times. If all of the students had judged Prosthetic Technics to require more manipulative ability than any other course it would have been underlined 288 times (6×48); actually it was underlined for a total of 281 paired comparisons, or 97 per cent of the total possible comparisons, and

[3] One of the sophomore courses, bacteriology, is a new course and is not included in the list.

TABLE I

COURSES RANKED IN TERMS OF COMPARATIVE AMOUNT OF MANIPULATIVE ABILITY THEY WERE JUDGED TO REQUIRE

FRESHMAN COURSES	PER CENT	RANK	SOPHOMORE COURSES	PER CENT	RANK
Prosthetic Technics	97	1	Crown & Bridge Tech.	91	1
Oral Anatomy	84	2	Operative Technics	80	2
General Anatomy	57	3	Prosthetic Technics	79	3
Physiol. Chemistry	41	4	Oral Hygiene	58	4
Physiology	40	5	Pharmacology	41	6
Embryology	21	6	Pathology	38	7
Metallurgy	10	7	Physiology	21	8
			Orthodontia	19	9

obtained the highest rank. The other per cents and ranks in Table I are interpreted in the same manner.

It is significant to note that, for the freshman courses, those ranked 1 and 2 in the table were grouped together, while those ranked 5 and 7 were grouped into another class by factor analysis. If we were to name the first group technical and the last group academic or scholastic, the results of the paired comparisons method would agree fairly well with the factor analysis method. A third group, obtained by factor analysis, consisting of those courses ranked 3, 4, and 6, would occupy an intermediate category.

For the sophomore courses the factor analysis method yielded four groups. One of the groups, consisting of courses ranked 1, 2, and 3, undoubtedly consists of technical courses while another group, comprising courses ranked 6, 7, and 8, seem to be academic courses. The other two factor analysis groups may require mixtures of the two kinds of aptitudes; or it is possible that entirely separate kinds of ability or aptitudes are required for distinctive performance in them. Results of grouping by the factor analysis method are tentative; the utility of the method is to be further checked in subsequent samples and on additional criteria pertaining to the samples considered here.

It will be interesting to use the ranks of the various criteria again in a later section, when performance in the various courses is compared with several kinds of predictors, some of which are alleged to measure academic aptitude and proficiency, and others, manipulative or technical aptitude and proficiency.

PREDICTORS OF SUCCESS

After a review of the literature[4] pertaining to prediction of success

[4] Bellows, R. M. "The status of selection and counseling techniques for dental students." *Journal of Consulting Psychology,* 1940, 4, 10-14.

in dental school the trial predictors were adopted and the tests were administered for experimental purposes to the two samples, which consisted of 61 students (1938-39 freshmen) and 91 students (1939-40 freshmen). These trial predictors are described below. The various items and subtests are considered in the next section in relation to the different criteria.

1. *Trial Predictors for Manipulative and Technical Criteria.* Two kinds of items were employed as trial predictors for the manipulative or technical criteria. These consisted of the Worker Analysis Section Finger Dexterity Test[5] and the MacQuarrie Test for Mechanical Ability.

The Worker Analysis Section Finger Dexterity Test is an objective, individual test designed to measure rate of precision manipulation of small objects by the fingers of both hands working simultaneously.

The MacQuarrie Test for Mechanical Ability comprises seven subtests of the paper and pencil type, probably designed to measure ability to perceive objects in space, eye finger co-ordination, and to some extent finger agility.

2. *Trial Predictors for Academic Criteria: Tests.* The American Council on Education Co-operative Zo-ology Test, Test C, Composite, Information and Scientific Method (Provisional form 1936) which measures achievement pertaining to selection of facts, terminology, and application of principles in this subject matter field was employed.

The American Council on Education Co-operative Chemistry Test, Test C, Composite, Information and Scientific Method (Provisional form 1937) was also used.

3. *Trial Items for Academic Criteria: Non-test predictors.* Pre-dental point-hour ratio (honor or grade points earned divided by number of credit hours), total number of semester hours of earned pre-dental credit, and total number of semester hours credit in chemistry were assembled and related to the various criteria for the second sample. For the first sample, pre-dental point-hour ratio alone was employed.

4. *Vocational Interest.* The Strong Vocational Interest Blank (revised form) for Men was given and scored for interest in the profession of dentistry and for several other occupations. The dental interest score was analyzed in relation to the criteria.

[5] Developed by Worker Analysis Section, United States Employment Service. The apparatus and detailed directions for uniform procedure were made available to the writers for experimental purposes through the courtesy of C. L. Shartle.

5. *Primary Mental Abilities.* The American Council on Education Tests for Primary Mental Abilities, Experimental Edition, was used. This battery of tests is designed to appraise seven mental abilities, or factors, which have been derived by L. L. Thurstone, namely perception, number, verbal, space, memory, induction, and reasoning.

6. *Combined predictor items.* A number of the predictor items have been combined statistically for maximum forecasting efficiency for predicting composite criteria. Utility and limitations of these techniques are discussed in the following section.

RELATION OF PREDICTORS TO CRITERIA

The various items are considered in the first part of this section as they are related individually to the criteria, and later in the section their selection and combination for maximum forecasting efficiency will be described.

The following tables indicate product-moment correlation coefficients[6] which summarize relation of trial predictors to various criteria as defined in the previous section. Names of the courses have been omitted, the criteria being readily identified by reference to Table I. The ranks of the various criteria, showing judged amount of manipulative or technical ability required for success in them, have been used in the tables as identifying symbols. Sample A, freshmen, consisted of 61 cases; sample B, freshmen, consisted of 91 cases; and sample A, sophomores, consisted of 60 to the 61 (tested as freshman sample A) who were followed through their sophomore year.

Table II shows the correlations of the Worker Analysis Section Finger Dexterity Test and also correlations for some of the MacQuarrie subtests. Correlations for three of the MacQuarrie subtests, viz., tracing, tapping, and dotting, revealed that they were low in relation to all of the criteria of success, and they have not been included in the table. Only three of these were .30 or above—the tapping subtest correlated .30 with both criteria 5 and 6 for freshman sample A, and .36 with criterion 7 (pharmacology) for the sophomore sample.

Finger dexterity as measured by this test, in which speed of manipulation is the important characteristic measured, is not significantly

[6] Coefficients are given to two decimal places to facilitate reading the tables. The coefficients given, as well as tables of inter-correlations among criterion and predictor variates to three decimal places, for both samples, and means and standard deviations (which are not included here) are available to the interested reader. Duplicated copies of raw data are also available.

TABLE II

THE FINGER DEXTERITY TEST, TOTAL SCORE, AND THE MACQUARRIE TEST, SUBTESTS AND TOTAL SCORE, CORRELATED WITH FRESHMAN CRITERIA, SAMPLE A (N=61) AND SAMPLE B (N=91), AND SOPHOMORE CRITERIA OF SAMPLE A (N=60)

Freshman Criteria	Finger Dexterity Total Score		Copying		Location		Blocks		Pursuit		Total	
	Sample		Sample		Sample		Sample		Sample		Sample	
	A	B	A	B	A	B	A	B	A	B	A	B
1	.36	.07	.31	.38	.31	.31	.44	.26	.32	.32	.31	.45
2	.13	.05	.25	.29	.17	.23	.24	.32	.40	.36	.25	.37
3	.15	.10	.53	.28	.25	.26	.18	.20	.37	.10	.46	.32
4	.28	.16	.38	.19	.40	.04	.16	.17	.32	.01	.39	.13
5*	.13	—	.40	—	.34	—	.20	—	.40	—	.44	—
6	.09	.14	.39	.18	.21	.07	.30	.27	.28	.04	.37	.22
7	.08	.11	.26	.24	.22	.21	.09	.02	.21	.12	.20	.18
Composite	.20	.14	.51	.32	.26	.24	.30	.24	.45	.16	.48	.35
Sophomore Criteria	Sample A		Sample A		Sample A		Sample A		Sample A		Sample A	
1	.25		.11		.16		.27		.10		.06	
2	.13		.42		.30		.40		.40		.42	
3	.38		.36		.29		.45		.33		.33	
4	.00		.15		.10		−.07		.11		.06	
5	.13		.13		.07		.10		.26		.10	
6	.17		.42		.32		.05		.29		.43	
7	.13		.19		−.05		.02		.04		.15	
8	.04		.10		.04		−.02		.03		.13	
9	.21		.41		.41		.32		.30		.36	
Composite	.30		.43		.29		.29		.38		.40	

* Criteria for sample B are not available as this course was not given to that group.

related to performance in any of the courses except prosthetic techniques, with which it correlated .36 for one freshman sample and .38 for the sophomore group. Performance on this test should be more highly related to the manipulative courses than to the academic. Finger dexterity as measured correlated .20 and .14 with the freshman composite criterion (average of the numerical grades in all courses) and .30 with the sophomore composite.

The MacQuarrie subtest scores and total scores shown in the table were found to correlate highly with the criteria when the shortness of the tests is considered. No definite trend which favors the manipulative courses is noted except in the case of the blocks subtest performance (which involves perception of space relations) and total score, for the freshman criteria. This trend does not seem to hold for the sophomore criteria. Evidently proficiency in spatial relations, as

TABLE III

THE CO-OPERATIVE ZOOLOGY AND CHEMISTRY ACHIEVEMENT TESTS CORRELATED WITH FRESHMAN CRITERIA, SAMPLE A (N=61) AND SAMPLE B (N=91), AND WITH SOPHOMORE CRITERIA OF SAMPLE A (N=60)

FRESHMAN CRITERIA	ZOOLOGY		CHEMISTRY	
	Sample		Sample	
	A	B	A	B
1	.19	−.13	.21	.00
2	.15	.07	.35	.12
3	.43	.18	.58	.26
4	.49	.44	.42	.44
5	.66	—	.56	—
6	.48	.45	.54	.34
7	.37	.01	.47	.15
Composite	.50	.31	.62	.35
Sophomore Criteria	Sample A		Sample A	
1	.05		.13	
2	.28		.38	
3	.12		.26	
4	.00		.05	
5	.24		.30	
6	.43		.57	
7	.14		.13	
8	.40		.38	
9	.51		.45	
Composite	.35		.46	

measured by some of the MacQuarrie tests, is more highly related to technical course success than is rate of manipulation.

Table III shows coefficients of correlation for the Co-operative Zoology and Chemistry tests.

In both of these tests, which measure achievement in academic fields, a general tendency for relatively high relation with the more academic courses and low relation with technical or manipulative courses is evident. The achievement tests showed a consistent relation to the composite indices of success used.

We would also probably expect pre-dental point-hour ratio to correlate more highly with academic than with the more technical courses. There is, however, no very evident tendency for this to be the case, as shown by the correlations in Table IV. High point-hour ratio probably reflects ability to adapt in general to instructors and to various kinds of training situations, which implies aptness for technical as well as the more scholastic kind of training.

One of the most interesting findings of the study is revealed

in the very low relation between total number of semester hours offered at time of entrance and criteria.[7] This result, if verified by subsequent findings, has very serious implications for definition of entrance requirements. The number of chemistry hours taken in pre-dental school was somewhat more significantly related to dental school success, although here also the relation was low. Quality rather than quantity (above a minimum level) of pre-dental credit seems important for dental school success. Additional information on this problem as well as importance of pattern of pre-dental work is necessary.[8]

Table V gives correlations of the Strong Vocational Interest blank, scored for dental interest, with the criteria. It is noted that, for

TABLE IV

PRE-DENTAL POINT-HOUR RATIO CORRELATED WITH CRITERIA OF THE THREE SAMPLES, AND NUMBER OF PRE-DENTAL SEMESTER HOURS AND NUMBER OF SEMESTER HOURS IN CHEMISTRY CORRELATED WITH FRESHMAN CRITERIA OF SAMPLE B

FRESHMAN CRITERIA	PRE-DENTAL POINT-HOUR RATIO		NUMBER PRE-DENTAL HOURS CREDIT	
	Sample		Total	Chemistry
	A	B	B	B
1	.31	.12	—.02	.09
2	.36	.16	.05	.14
3	.45	.20	.09	.23
4	.46	.40	.14	.24
5	.25	—	—	—
6	.35	.32	.15	.18
7	.20	.23	.04	.00
Composite	.47	.34	.14	.22
Sophomore Criteria	Sample A			
1	.35			
2	.30			
3	.36			
4	.18			
5	.19			
6	.20			
7	.19			
8	.25			
9	.35			
Composite	.41			

[7] Average number of semester hours offered was 90.5; the standard deviation of the distribution was 29.5.

[8] The need for additional and intensive study of this problem, not only for dental schools but for other professional schools, is emphasized.

TABLE V

DENTAL INTEREST (STRONG VOCATIONAL INTEREST BLANK) CORRELATED WITH FRESHMAN CRITERIA, SAMPLES A (N=61) AND B (N=91), AND WITH SOPHOMORE CRITERIA OF SAMPLE A (N=60)

FRESHMAN CRITERIA	DENTAL INTEREST	
	Sample	
	A	B
1	.33	.12
2	.29	.06
3	.06	.16
4	.01	.15
5	.01	.16
6	.03	.25
7	−.16	−.02
Composite	.13	.19
Sophomore Criteria	Sample A	
1	.30	
2	.29	
3	.27	
4	.22	
5	.22	
6	−.05	
7	−.04	
8	−.15	
9	.03	
Composite	.18	

freshman sample A criteria and for sopohomore criteria, this measurement of dental interest correlated low but significantly with the more technical criteria. The measurements indicate degree of conformity of the interest responses of the subject to those of established practicing dentists. The technical courses are probably more like the professional working environment of the practicing dentist than the academic courses. Those who did well in the more technical courses tended to conform with the likes and dislikes of dentists.

The Thurstone Primary Abilities Test had not been tried in dental schools when they were selected for experimental purposes. They were selected because they were alleged to measure abilities such as space perception and memory which would, á priorí, be thought to be significantly related to some of the criteria, and because Thurstone[9] had stated, "We feel quite certain that seven of the primary

[9] Thurstone, L. L. "A new concept of intelligence and a new method of measuring primary abilities." *Educational Record,* Supplement No. 10, October, 1936, p. 138.

abilities have been isolated with sufficient certainty to be of practical use in educational and vocational counseling."

Table VI gives correlations for the seven primary abilities. The abilities are abbreviated in the table, P being used for perception, V for verbal, etc. Inter-correlation of the seven abilities with pre-dental point-hour ratio is shown in a row in the middle of the table. None of these showed a significant relationship. The correlations, in general, were low. Combination of the factors or abilities by statistical method failed to yield a multiple correlation above .30 when the composite criterion (freshman) was used.

Significance of the differences between average scores of dental students (sample A) and Bernreuter's sample of 170 freshman engineering students, Thurstone's group of 300 high school seniors, and Harrell's[10] sample of air corps technical students who were high school graduates were computed. For perception, number, and memory abilities the dental students were significantly higher than any of the other three samples. Engineering students were significantly higher than the dental students in reasoning ability as measured. In spite of this power of some of the primary mental ability measurements to differentiate between groups with differences which are statistically reliable and stable, the tests did not differentiate between good and poor students.[11]

Patterns of the abilities of both good and poor students in terms of the freshman composite criterion were set up graphically as standard deviations from the averages and judges were asked to pick out the good students on the basis of the patterns. The results obtained from the several judges (who were trained and experienced in use of technique for student counseling)[12] showed that they were unable to pick out the six best students from the six poorest ones on the basis of these ability patterns. The six good and the six poor subjects were selected from both freshman populations, comprising a total of 152 students, in terms of composite criteria.

The correlations of the 16 subtests, from which the seven primary

[10] From a study by T. W. Harrell who courteously transmitted the data to the writer for purposes of this comparison.

[11] This result, which one of the writers has found in several previous investigations, has implications unfavorable for the use of group membership patterns in academic and educational counseling.

[12] J. T. Fontaine, L. P. Guest, R. C. Hackman, A. M. Kershner, J. W. Macmillan and A. C. Williams participated as judges.

TABLE VI

PRIMARY MENTAL ABILITIES CORRELATED WITH FRESHMAN CRITERIA, SAMPLES A (N=61) AND B (N=91) AND SOPHOMORE CRITERIA OF SAMPLE A (N=60)

FRESHMAN CRITERIA	PRIMARY MENTAL ABILITIES													
	P		N		V		S		M		I		R	
	Sample		Sample		Sample		Sample		Sample		Sample		Sample	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1	.01	.06	−.05	−.04	−.07	−.13	.36	.11	.27	.30	.02	−.03	.09	.13
2	.09	−.09	.07	−.05	−.06	−.10	.26	.13	.04	.27	.17	−.02	.29	.05
3	.19	.11	.33	.10	.19	.01	.16	.08	.02	.08	.18	.01	.19	−.01
4	.35	.21	.16	.20	.27	.29	.19	.06	.06	−.06	.20	.24	.09	.19
5	.23	—	.26	—	.30	—	.18	—	−.05	—	.12	—	.14	—
6	.28	.12	.34	.11	.31	.20	.11	.03	.01	−.04	.18	.10	.12	.12
7	.12	−.01	.16	.13	.14	.09	.17	.03	.08	−.04	.20	−.02	−.11	−.13
Composite	.23	.10	.26	.16	.21	.12	.28	.09	.04	.12	.20	.06	.20	.05
Pre-dental Pt. Hr. Ratio	.00	.09	.13	.21	−.04	.32	.06	.17	−.03	.02	−.02	.15	.12	.29

SOPHOMORE CRITERIA	Sample A	Sample A	Sample A	Sample A	Sample A	Sample A	Sample A
1	−.07	−.09	−.18	.09	.05	.01	.08
2	.03	.12	.02	.31	−.01	.05	.07
3	−.05	−.08	−.12	.32	.17	.05	.11
4	.12	−.12	.07	.14	.09	.13	−.11
5	.28	.15	.28	.11	.17	.18	.04
6	.42	.39	.43	.02	.19	.30	.04
7	.09	.25	.01	−.14	−.06	.02	.21
8	.14	.09	.26	.06	−.13	.10	.21
9	.22	.19	.25	.20	.12	.24	.20
Composite	.14	.21	.14	.16	.08	.15	.14

abilities are derived, were also computed with the criteria. These results are not shown in the table. Only 4 per cent of more than 400 coefficients computed between subtests and available criteria was above .30.

Detailed item analysis of eight of the 16 subtests, reported by Stalnaker, has shown that some items of the tests are ineffective. He found that, "No attempt appears to have been made to check validity and difficulty of the items included in the test."[13] He also intercorrelated the subtests that are added together to give the primary factor scores, and found these correlations to be low, interpreting this result to indicate low reliability of the Primary Mental Ability tests.[14] The latter result was corroborated by our findings. These facts may explain in part the lack of relation between these measures and the criteria of this study, which have been shown to be reasonably predictable by other tests and items of information.[15] None of the

[13] Stalnaker, J. M. Primary Mental Abilities. *School and Society,* 1939, 50, 868-872.
[14] *Ibid.*
[15] Few studies have as yet been reported on the validity of the Thurstone Primary Mental Ability Tests. Bernreuter correlated the primary abilities with performance

Primary Mental Ability tests or subtests were selected statistically for combination in the development of test batteries.

Three combined batteries of predictors have been developed for criterion composites and are to be checked on different experimental samples. The first battery consists of Co-operative Chemistry Achievement Test, MacQuarrie Test for Mechanical Ability (total score) and pre-dental point-hour ratio. It was developed on sample A, freshman criterion composite. These items were selected from those available and combined for maximum forecasting efficiency by the Wherry-Doolittle[16] test selection and combination method, yielding a multiple correlation of .72.

Another battery, developed on sample B, freshman criterion composite, by the Wherry-Doolittle test selection and combination method, consisted of the following six predictors: Co-operative Chemistry Achievement Test; MacQuarrie Mechanical Ability Test (copying subtest); pre-dental point-hour ratio; Co-operative Zo-ology Achievement Test; MacQuarrie Test for Mechanical Ability (location subtest); and number of semester hours in chemistry. The tests are named in the order in which they were statistically selected in the process of combination, which indicates relative value of each item in terms of the amount it contributed to the battery, *i.e.* the test mentioned first contributed most, that mentioned last contributed least, to the battery. This group of combined items yielded a multiple correlation of .57 with the freshman criterion composite of sample B.

The third battery, selected and combined by the same method as the second one, comprised the Co-operative Chemistry Achievement Test, MacQuarrie Test for Mechanical Ability (copying subtest), pre-dental point-hour ratio, Strong Vocational Interest Blank (revised) scored for dental interest, and the Worker Analysis Section Finger Dexterity Test (total score). These items are listed in the order of the amount of validity they contributed to the battery. The multiple correlation with the sophomore criterion composite was .63.

The writers desire to emphasize that these batteries are tentative; they are not to be used for selection purposes until checked on additional samples. It is well known that the validity of combined batteries as well as component items of which they are composed com-

of freshman engineering students, obtaining a median validity correlation of .32, the range being from .04 to .38. Bernreuter, R. G. Primary Ability Tests applied to engineering freshmen. *Psychological Bulletin,* 1939, 36, 548-549. Abstract.

[16] Stead, Shartle and Associates. *Occupational Counseling Techniques* (New York: American Book Co., 1940), pp. 129-131, 245-250.

monly fluctuate a great deal from one sample to another, and from original to subsequent criteria obtained on the same sample. This necessitates checks on cross validity and sustained validity, so that a particular battery may only be used with complete justification when its stability is known.

SUMMARY

Success in the first two years of dental school, defined in terms of numerical grades in courses of different kinds, was found to be associated with several identifying characteristics of students in the two samples studied. Some of the courses required technical ability, defined in terms of the subtests of the MacQuarrie Test for Mechanical Ability and to some extent in terms of a finger dexterity test. Distinctive performance in other courses, judged by the paired comparisons method to be more academic in kind, was associated with performance measured by the Co-operative Chemistry and Co-operative Zo-ology achievement tests. Interest in the profession of dentistry, as measured by the Strong Vocational Interest Blank, was found to be associated with success to a slight but significant degree in some of the technical, but not in the more academic, courses.

An interesting finding pertains to the relation of degrees of success with recorded differences in pre-dental training. Pre-dental point-hour ratio was significantly related to performance in nearly all courses studied; number of semester hours credit in chemistry was slightly related to performance in some of the courses; total number of semester hours of credit in pre-dental work was found not to be associated with degrees of success for the samples studied. Quality rather than amount of training was important. This finding, if verified by subsequent investigations, has serious implications for revision of admissions requirements as well as for revision of the pre-dental curriculum.

The Primary Mental Abilities Tests gave primary ability measurements and subtest scores which were found to be of little use as an aid to definition of requirements of success. It was not possible to differentiate the best students from the poorest students of the two samples by statistical combination or by graphic patterns of these measurements.

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THE VALUE OF RANK IN HIGH SCHOOL GRADUATING CLASS FOR PREDICTING SCHOLASTIC ACHIEVEMENT IN COLLEGE

E. C. SEYLER

IN SEPTEMBER, 1935, the registrar's office of the University of Illinois began a comprehensive study of the scholastic records of freshmen students. The first results of this study were presented in an article entitled, "The Predictive Value of Rank in High School Graduating Class."[1] This article presented a picture of the scholastic records of students entering the University in September 1935 and a comparison of their scholarship at the University with their scholarship in high school as measured by class rank. Similar data were obtained for the freshmen admitted in September 1936 and September 1937 and the data for all three classes were combined. The results were presented in an article appearing in the October 1939 issue of the *Journal*.[2]

Since the publication of these two articles, additional data have been secured concerning the entering classes of 1935, 1936 and 1937 as well as rather complete information concerning the freshman class entering the University in September 1938. This report is, therefore, to some extent a follow-up study of the information presented in the previously mentioned articles.

SIZE OF HIGH SCHOOL AND COLLEGE SUCCESS

Of the 7,006 students entering the University in September 1935, September 1936 and September 1937, who completed the freshman year of work in the University, 6,263 were graduates of 658 different Illinois high schools and 743 were graduates of 535 high schools outside of Illinois. These 658 Illinois high schools were classified into eight different groups according to size of total student enrolment.

[1] Tuttle, G. P., "The Predictive Value of Rank in High School Graduating Class," *Bulletin of the American Association of Collegiate Registrars,* 12: 111-118, January, 1937.

[2] Seyler, E. C., "The Value of Rank in High School Graduating Class for Predicting Freshman Scholarship," *Journal of the American Association of Collegiate Registrars,* 15: 5-22, October, 1939.

This classification as shown in Table I is more or less an arbitrary one but one which provides for ease of tabulation and at the same time for an adequate representation of both students and schools within each division.

Table I presents the correlations between the two variables, rank in class and freshman scholastic average,[3] along with the mean per-

TABLE I

RELATION OF PERCENTILE RANK IN HIGH SCHOOL GRADUATING CLASS AND FRESHMAN SCHOLASTIC AVERAGE—STUDENTS CLASSIFIED ACCORDING TO SIZE OF HIGH SCHOOL OF GRADUATION

SIZE OF ILLINOIS HIGH SCHOOLS REPRESENTED	NUMBER OF STUDENTS	NUMBER OF HIGH SCHOOLS REPRESENTED	MEAN PERCENTILE RANK	STANDARD DEVIATION OF PERCENTILE RANK	MEAN FRESHMAN AVERAGE	STANDARD DEVIATION OF FRESHMAN AVERAGE	COEFFICIENT OF CORRELATION
Less than 100	398	163	75.10	21.40	3.284	.78	.57±.023
100– 199	791	208	76.06	20.96	3.278	.82	.61±.015
200– 399	910	125	71.72	23.60	3.279	.82	.58±.015
400– 599	439	49	68.29	26.11	3.135	.81	.63±.019
600– 999	976	36	70.36	23.08	3.212	.83	.64±.013
1000–2499	1191	44	64.67	26.29	3.141	.80	.65±.011
2500–3999	873	19	55.17	27.77	2.992	.80	.64±.014
4000 and over	685	14	55.64	28.37	2.989	.76	.55±.018
Total Illinois	6263	658	66.63	26.03	3.161	.81	.62±.005
Non-Resident	743	535	62.86	26.77	3.180	.78	.54±.018
Total	7006	1193	66.23	26.13	3.178	.81	.61±.005

centile rank and the mean scholastic average for each size of high school, with their corresponding standard deviations. The table may be read as follows: Three hundred ninety-eight high school graduates representing 163 different high schools in Illinois with student enrolments of less than 100 entered the University in September 1935, September 1936 and September 1937. The mean percentile rank in high school graduating class for this group is 75.10 with a standard deviation of 21.40. The mean scholastic average for the freshman year is 3.284 with a standard deviation of .78. The coefficient of correlation

[3] The University of Illinois has a literal grading system. A, B, C, and D are passing grades, and E a failure. Weighted numerical equivalents are assigned to each grade as follows: A = 5 points, B = 4, C = 3, D = 2, and E = 1. A student having an equal number of semester hours of B and C would therefore have a scholastic average of 3.500.

between rank in high school class and freshman scholastic average for this group is .57.

The data in this table show the difference in the quality of students received from the various size high schools and the quality of work done in the first year in the University.

The mean percentile rank in class ranges from 55.17 for students coming from high schools of 2,500 to 3,999 students to 76.06 for students coming from high schools of 100 to 199 students. The mean scholastic average ranges from 2.989 for students coming from high schools of 4,000 or more students to 3.284 for students coming from high schools of less than 100 students. The coefficient of correlation ranges from .55 for students coming from schools of 4,000 and over to .65 for students coming from schools with 1,000 to 2,499 students. It is interesting to note that the amount of relationship between high school rank and freshman average as indicated by the correlation coefficients for the group coming from the smallest high schools (less than 100) and for the group coming from the largest high schools (4,000 and over) is less than for any of the intervening groups.

A comparison of the mean percentile ranks and mean freshman averages of the several groups shows that at the University of Illinois a better quality of student is received from the small high schools than from the large schools. This is also substantiated by the fact that the achievement of students from small schools is greater than that of students from large schools. It also appears that the size of the high school does not seem to have a sufficient effect on the relationship between rank in high school class and freshman scholarship to warrant an educational guidance program based on the size of the high school from which the student was graduated.

RANK, LENGTH OF ATTENDANCE AND DEGREES RECEIVED

Some of the results of a four-year study of the class entering in September 1935 are presented, herewith, in Table II in order to show the relationship between rank in high school class and length of attendance and success in obtaining a degree. Complete scholastic records of these students were kept from September 1935 to June 1939, the normal four years required to receive a degree. Actually these students by attending the full amount of time including the summer sessions of 1936, 1937 and 1938 were able to complete the equivalent of nine and one-half semesters of work.

This table may be read as follows: Of the 2,600 freshmen entering the University in September 1935, 312 ranked in the lowest quarter of their respective high school graduating classes. Of these 312 students, 41 or 13.14 per cent received degrees by June 1939 or within the normal four year period, 25.32 per cent failed to complete at least two semesters of work, 62.81 per cent failed to complete at least four semesters, 73.07 per cent failed to complete at least six

TABLE II

ATTENDANCE AND DEGREE RECORD OF FRESHMEN ENTERING THE UNIVERSITY IN SEPTEMBER 1935

Division of High School Class	Number of Students	Number Receiving Degrees Within 4 Year Period	Per Cent of Group Receiving Degrees Within 4 Year Period	Per Cent of Group Failing to Complete at Least				Average Grade for All Work Completed
				2 Semesters	4 Semesters	6 Semesters	8 Semesters	
Lowest Quarter	312	41	13.14	25.32	62.81	73.07	82.05	2.673
Next to Lowest Quarter	475	68	14.32	16.42	49.89	67.15	78.31	2.786
Next to Highest Quarter	656	169	25.76	10.66	38.40	52.27	64.62	3.055
Highest Quarter	1059	527	49.76	3.97	17.48	31.36	44.11	3.679
No Rank	98	15	15.31	16.34	46.94	69.38	75.50	2.930
Total	2600	820	31.54	10.96	35.23	49.62	61.27	3.295

semesters, and 82.05 per cent failed to complete at least eight semesters. The average grade for all work completed by these 312 students was 2.673.

A comparison of the divisions presented in this table shows that there is a definite positive relationship between rank in class and length of attendance and degrees received. As the scale is ascended from the lowest quarter to the highest, it is found that an increasing percentage of students receive degrees and the length of attendance increases. It should be remembered, however, that illness, transferring to other institutions, financial difficulties, and many other circumstances affecting college attendance in addition to scholarship may be directly responsible for the length of attendance or the length of time required to secure a degree. There is, however, a marked relationship between rank in high school class and student mortality and success.

SCHOLASTIC ACHIEVEMENT OF MEN AND WOMEN STUDENTS

The scholastic achievement of men as compared to that of women has in the past and will no doubt in the future provide an interesting topic for experimental study. The preponderance of opinion is that women students get better grades than men students. In many instances, however, opinions are formed on the basis of grade distribu-

TABLE III

RELATION OF PERCENTILE RANK IN HIGH SCHOOL GRADUATING CLASS AND FRESHMAN SCHOLASTIC AVERAGE FOR THE ENTERING CLASS OF 1938

A. Summary of men students arranged according to colleges

COLLEGE	TOTAL NUMBER OF CASES	MEAN PERCENTILE RANK	STANDARD DEVIATION OF PERCENTILE RANK	MEAN FRESHMAN AVERAGE	STANDARD DEVIATION OF FRESHMAN AVERAGE	COEFFICIENT OF CORRELATION
L.A.S.	534	68.10	24.47	3.220	.81	.57±.020
Commerce	366	62.60	25.96	3.028	.80	.64±.021
Engineering	370	66.99	24.92	3.181	.85	.61±.022
Agriculture	209	66.19	24.54	3.098	.73	.60±.030
F.A.A.	63	65.87	23.94	3.215	.75	.51±.063
Phys. Educ.	68	37.51	24.47	3.032	.56	.49±.062
*Total Men	1615	64.91	25.64	3.143	.80	.59±.011

B. Summary of women students arranged according to colleges

L.A.S.	408	76.05	20.61	3.350	.79	.61±.021
Commerce	60	78.88	22.00	3.117	.85	.66±.049
Agriculture	131	79.06	19.55	3.201	.73	.64±.035
F.A.A.	55	72.91	24.32	3.351	.62	.55±.063
Phys. Educ.	25	56.96	22.83	2.811	.67	.51±.099
Total Women	679	75.92	21.38	3.281	.78	.60±.017

* Includes 5 cases in Industrial Education.

tions without making any attempt to equate the two groups for intelligence. In order to obtain some idea of the scholastic achievement of men as compared to that of women, the records for the class entering in September 1938 were studied.

Table III shows the relation of percentile rank in high school graduating class and freshman scholastic average for both men and women who entered the University in September 1938. This table may be read as follows: 1,615 men having a mean percentile high school rank of 64.91 made a mean scholastic average of 3.143 in their first

year in college. The amount of relationship between their scholastic achievement in high school and in college is indicated by the coefficient of correlation of .59. Six hundred seventy-nine women having a mean percentile rank of 75.92 made a mean scholastic average of 3.281 in their first year in college. The coefficient of correlation between rank in high school class and freshman scholastic average is .60.

From these data, it may be stated that the women students entering in September 1938 were superior in scholarship to the men students both in high school as judged by their rank in class and in the freshman year of college as judged by their freshman scholastic average. The amount of relationship of these two factors is practically the same for men and women as judged by the coefficients of .59 and .60 respectively. It is interesting to note that the women are superior to the men in all colleges both in high school rank and in freshman average with the exception of the School of Physical Education. Here in spite of the fact that the women ranked higher in high school than the men, their freshman average is below that of the men.

PREDICTING SUCCESS

Let us now consider more in detail the possibilities of predicting success in college. In the article, "The Value of Rank in High School Graduating Class for Predicting Freshman Scholarship,"[4] the writer attempted to predict by statistical means which of the 7,006 students of the 1935, 1936 and 1937 entering classes would make at least a C or 3.000 average and which would fail to do so. The accuracy of these predictions is shown in Table IV.

In Table IV, Section A, it may be seen that 2,327 of the 7,006 students were predicted to receive less than a C or 3.000 average. Of this number 74.21 per cent or approximately three out of every four failed to make a C average whereas 25.79 per cent or approximately one out of every four made at least a C or 3.000 average. In Section B, it may be seen that 4,679 of the 7,006 students were predicted to receive at least a C or 3.000 average. Of this number 72.58 per cent were accurately predicted while 27.42 per cent were inaccurately predicted. Again the prediction is accurate in approximately three out of four cases.

[4] Seyler, E. C., "The Value of Rank in High School Graduating Class for Predicting Freshman Scholarship," *Journal of the American Association of Collegiate Registrars,* 15: 5-22, October, 1939.

TABLE IV

SUMMARY OF CASES BY COLLEGES HAVING PERCENTILE RANKS ABOVE AND BELOW THE PERCENTILE RANK AT WHICH A MOST PROBABLE AVERAGE OF C IS REACHED (1935, 1936 and 1937 classes)

A. Summary of cases having percentile ranks below the percentile rank at which a most probable average of C is reached.

College	Percentile Rank at Which the Most Probable Average of C or 3.000 Is Reached	Total Number of Cases	Cases Falling Below Percentile Rank Indicated		Cases Falling Below Percentile Rank Indicated Making at Least a C Average		Cases Falling Below Percentile Rank Indicated Failing to Make at Least a C Average	
			Number	Per Cent	Number	Per Cent	Number	Per Cent
L. A. S.	58	3006	874	29.08	238	27.23	636	72.77
Commerce	60	1417	642	45.31	133	20.72	509	79.28
Engineering	59	1097	353	32.18	88	24.93	265	75.07
Agriculture	61	916	272	29.69	73	26.84	199	73.16
F.A.A.	51	312	81	25.96	29	35.80	52	64.20
Phys. Educ.	45	249	114	45.78	43	37.72	71	62.28
*All Colleges	58	7006	2327	33.21	600	25.79	1727	74.21

B. Summary of cases having percentile ranks at or above the percentile rank at which a most probable average of C is reached.

College	Percentile Rank at Which the Probable Average of C or 3.000 Is Reached	Total Number of Cases	Cases Falling at or Above Percentile Rank Indicated		Cases Falling at or Above Percentile Rank Indicated Making at Least a C Average		Cases Falling at or Above Percentile Rank Indicated Failing to Make at Least a C Average	
			Number	Per Cent	Number	Per Cent	Number	Per Cent
L.A.S.	58	3006	2132	70.92	1579	74.06	553	25.94
Commerce	60	1417	775	54.69	559	72.13	216	27.87
Engineering	59	1097	744	67.82	528	70.97	216	29.03
Agriculture	61	916	644	70.31	463	71.89	181	28.11
F.A.A.	51	312	231	74.04	179	77.49	52	22.51
Phys. Educ.	45	249	135	54.22	83	61.48	52	38.52
*All Colleges	58	7006	4679	66.79	3396	72.58	1283	27.42

* Includes 9 cases in Industrial Education.

In order to test the accuracy of these predictions a step further, the regression equations obtained from the combined classes of 1935, 1936 and 1937 were applied to the class entering in September 1938. The results are shown in Table V. The percentile rank of 58 was determined for the combined classes of 1935, 1936 and 1937 as being the minimum rank at which a C average should be made. When applied to the 1938 class, it was found that the predictions were correct

in approximately seven out of every ten cases as 69.74 per cent failed to make a C average as shown in Section A, and 71.64 per cent made at least a C average as shown in Section B.

TABLE V

SUMMARY OF CASES BY COLLEGES HAVING PERCENTILE RANKS ABOVE AND BELOW THE PERCENTILE RANK AT WHICH A MOST PROBABLE AVERAGE OF C IS REACHED
(1938 Class)

A. Summary of cases having percentile ranks below the percentile rank at which a most probable average of C is reached.

COLLEGE	PERCENTILE RANK AT WHICH THE MOST PROBABLE AVERAGE OF C OR 3.000 IS REACHED	TOTAL NUMBER OF CASES	CASES FALLING BELOW PERCENTILE RANK INDICATED		CASES FALLING BELOW PERCENTILE RANK INDICATED MAKING AT LEAST A C AVERAGE		CASES FALLING BELOW PERCENTILE RANK INDICATED FAILING TO MAKE AT LEAST A C AVERAGE	
			Number	Per Cent	Number	Per Cent	Number	Per Cent
L.A.S.	58	942	239	25.37	78	32.64	161	67.36
Commerce	60	426	167	39.20	39	23.35	128	76.65
Engineering	59	370	129	34.86	33	25.58	96	74.42
Agriculture	61	340	94	27.65	29	30.85	65	69.15
F.A.A.	51	118	24	20.34	11	45.83	13	54.17
Phys. Educ.	45	93	47	50.54	20	42.55	27	57.45
*All Colleges	58	2294	704	30.69	213	30.26	491	69.74

B. Summary of cases having percentile ranks at or above the percentile rank at which a most probable average of C is reached.

COLLEGE	PERCENTILE RANK AT WHICH THE MOST PROBABLE AVERAGE OF C OR 3.000 IS REACHED	TOTAL NUMBER OF CASES	CASES FALLING AT OR ABOVE PERCENTILE RANK INDICATED		CASES FALLING AT OR ABOVE PERCENTILE RANK INDICATED MAKING AT LEAST A C AVERAGE		CASES FALLING AT OR ABOVE PERCENTILE RANK INDICATED FAILING TO MAKE AT LEAST A C AVERAGE	
			Number	Per Cent	Number	Per Cent	Number	Per Cent
L.A.S.	58	942	703	74.63	524	74.54	179	25.46
Commerce	60	426	259	60.80	172	66.41	87	33.59
Engineering	59	370	241	65.14	172	71.37	69	28.63
Agriculture	61	340	246	72.35	170	69.11	76	30.89
F.A.A.	51	118	94	79.66	69	73.40	25	26.60
Phys. Educ.	45	93	46	49.46	31	67.39	15	32.61
*All Colleges	58	2294	1590	69.31	1139	71.64	451	28.36

* Includes 5 cases in Industrial Education.

PRACTICAL APPLICATIONS OF PREDICTION

What use has been made of this information by the University of Illinois? Since the results of these studies have been known, the Uni-

versity is paying much more attention than heretofore to the quality of the student received directly from the high schools. Committees on admission and educational policy have become acquainted with the quality of student received and the quality of work done in college with the result that some very important changes have been made. For example, beginning with the entering class of 1940, the Registrar is authorized to admit, without adhering to the usual major and minor requirements, a student whose scholarship rank is in the upper 50 per cent of his high school graduating class, and students coming from the lowest quarter of their graduating class are admitted on probation. In connection with their first registration in the University, lowest quarter students must take certain tests prescribed by the Personnel Bureau. The tests are as follows: the Strong Vocational Interest, Iowa High School Content, Iowa Silent Reading, English Training, and American Council Psychological. In addition, Liberal Arts and Science students are required to take the Foreign Language Aptitude Test. These tests are taken on Monday and Tuesday preceding freshman registration on Saturday. Beginning Wednesday afternoon, test results are available for the purpose of individual counseling service before registration and serve as a basis for the most suitable course selections. Where only one or two years of college attendance are indicated by the tests and other available data, students may be allowed to deviate from the regular curriculum in order to permit a program of special educational or vocational significance. Should such students become candidates for degrees, however, they must meet the usual graduation requirements in full. Every student admitted from the lowest quarter must register for three one-hour per week laboratory sessions in reading and study habits, these sessions to be continued for at least a month and longer if deemed necessary. The study materials used are the textbooks and actual class assignments. In addition to these provisions, personal conferences with individual students and group conferences on vocations and vocational interests will be supplied periodically. From this program, it may be seen that the University has recognized the fact that there are students ranking in the lowest quarter who, with proper guidance, can and will succeed in college. For those who cannot maintain acceptable academic standards, appropriate counseling and a program suited to their particular interests and abilities will greatly benefit them in selecting vocational goals which do not require a college degree.

Another practical application that is being made at the University

of Illinois of the predictive value of rank in high school class is with reference to fraternity scholarship. One of the functions of the Dean of Men's office has been to prepare each semester the scholastic averages of all fraternities. Semester averages were then compared and the amount of gain or loss in achievement was determined. Considerable glory has gone to the fraternity which headed the list, and in many instances emphasis was placed on the fine study habits and inspiration to be found in one fraternity as compared to another. But under this plan, the fraternities were ranked according to the averages made without giving any consideration to the quality of student initiated into the fraternity.

On the basis of previous data obtained, it is now possible to predict the most probable first semester and first year averages that students will receive for any percentile rank within any of the colleges in which they may be registered. With this in mind, the percentile rank in high school has been determined for all freshman fraternity pledges who entered the University of Illinois in September 1940 and their first semester and freshman year probable averages have been determined. This material has been furnished to each fraternity. Upon completion of the first semester's work and again upon completion of the first year's work, the actual average received by each fraternity pledge can be compared with his "predicted" average. Thus fraternities have been given a method of judging the influence they have exerted on the scholastic achievement of their freshmen in relation to what those freshmen normally should be able to accomplish as judged by their rank in high school class. As soon as additional data for work beyond the freshman year are available, this method may be expanded to include the entire membership of fraternities at the University of Illinois. This use of high school rank for comparing the scholastic achievement within fraternities need not be confined to these particular organizations. It may be used very readily by any college or school for the purpose of comparing the achievement of one group with that of another.

CONCLUSIONS

In summarizing the data presented in this study, the writer has arrived at the following conclusions:

(1) That, while there is evidence to indicate that a better quality of student is received from the small high schools than from the large high schools, the size of the high school does not seem to have a

sufficient effect on the relationship between rank in high school class and freshman scholarship to warrant an educational guidance program based on the size of the high school from which the student was graduated.

(2) That there is a definite positive correlation between high school achievement as indicated by rank in graduating class and length of attendance and degrees received. Consideration must also be given, however, to such factors as illness, transferring to other institutions and many other circumstances affecting college attendance in addition to scholarship.

(3) That the women students of the entering class of 1938 were superior to the men students in scholastic achievement both in high school and in the first year in the University. The amount of relationship between high school rank and college achievement is practically the same for both sexes.

(4) That by means of rank in high school class predictions of scholastic achievement of individual cases within one entering class may be made with a favorable degree of accuracy on the basis of statistical data derived from the scholastic records of previous classes.

(5) That the rank in class can be of value for comparing the scholastic achievement of different groups of students such as fraternities, sororities and others.

(6) That rank in class, which is readily available, can be of value to deans of colleges, personnel advisers, and other administrative officers in determining which students, on the basis of their percentile rank in high school, need immediate personal attention and assistance upon entering college.

(7) That the correlation coefficients presented in this study and in the previous studies mentioned in this article are either higher than or compare favorably with those obtained by other investigators using other factors affecting college grades. Rank in high school graduating class, therefore, offers a means of predicting scholastic success in college which has a distinctive value and which requires a minimum of time, effort and expense to put into practical use.

—*Volume 16, Number 2*

GRADE AVERAGES OF STUDENTS GRADUATING FROM THE UNIVERSITY OF ARKANSAS 1934-1939*

FRED L. KERR

THE GRADES used at the University of Arkansas are as follows: A, B, C, D (passing grades), E (conditional failure, removable by second examination), and F (absolute failure). A student who receives an E grade has the opportunity of raising it by a second examination. Likewise, any student who receives a D grade has the opportunity of raising it by a second examination (except in the Summer School). There is no restriction on the grade assignable on the basis of a second examination. If a second examination is taken, the mark then assigned becomes the final record in place of the original grade. Furthermore, should a student elect to repeat a course at any time, the last mark assigned becomes the final record for that course in place of the earlier grade.

For purposes of computing averages and ranks, grade points are assigned as follows: To grade A, 6 points; B, 4 points; C, 2 points; D, 0 points; E, —1 point; F, —2 points. The "grade point average" for any student or group of students, for any semester or longer period, is obtained by multiplying the number of credit hours of each grade by the grade points assigned to that grade and then dividing the sum of these products by the total number of credit hours.

A general rule at the University of Arkansas prescribes that not more than 25 per cent of the work presented for graduation may be of D grade. This automatically sets a minimum grade point average of 1.50 on the work presented for graduation. A student who has excess hours of D grade in elective subjects, provided he has a corresponding excess in total hours of credit, may discard the excess D grades and not count them toward graduation. Likewise, a failure in an elective subject is not required to be repeated. Hence, a student who has met the graduation requirement may still appear with a "cumulative grade point average" lower than 1.50, since the cumulative average is based on all the work undertaken and not repeated. In the Colleges of Arts and Sciences, and Education, an additional restrictive rule requires a C average (2.00) on work presented for

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graduation. For the same reasons as stated above, however, a student graduating from one of these colleges may have a cumulative average lower than 2.00, but still meet the qualitative graduation requirement.

In assigning grades, a modified form of the so-called "Missouri" system is used. It is expected that the number of A grades will not exceed 10 per cent, B not more than 20 per cent, C from 40 to 50 per cent, D approximately 20 per cent, and E and F combined not more than 10 per cent. An instructor is not required to adhere strictly to this scale in any one class or in one semester, but he is expected to approximate this scale in the distribution of his grades over a period of several semesters unless he can show some definite reason for a variation therefrom. It will be seen, then, that the general average of the student body must be in the neighborhood of a C average (in actual fact it varies from about 2.05 to 2.20). Also it will be expected that the general average of the graduating students will be somewhat higher, since a large number of the students who receive low and failing grades do not continue to graduation.

PART I

Since it is scarcely feasible to compute the actual rank or comparative standing of the individual members of each graduating class, and since information of this type is frequently called for in connection with transfers to graduate schools, applications for fellowships, and in other placement service, this study was undertaken for the purpose of establishing norms by means of which the approximate rank of any graduate of the University could be readily estimated. This primary purpose is accomplished in Part I, which deals with the frequency distributions of the cumulative grade point averages of 1,754 students graduating from the five undergraduate, four-year colleges of the University during the six years from 1934 to 1939. Part II gives some supplementary data of interest which were encountered in the course of the study.

Figure I is a series of frequency polygons showing the distribution of averages by steps of 0.25 grade points in each of the five colleges. The actual frequency distributions and also the medians and first and third quartile points are also shown on the figure. As is to be expected, these polygons do not begin to approach a normal distribution curve, but are considerably skewed to the higher end by reason of the fact that all students whose grades are too low to graduate are automatically omitted from the distribution.

The College of Arts and Sciences and the College of Education, both of which require a 2.00 average for graduation, show their principal mode in the interval from 2.00 to 2.24. Secondary modes

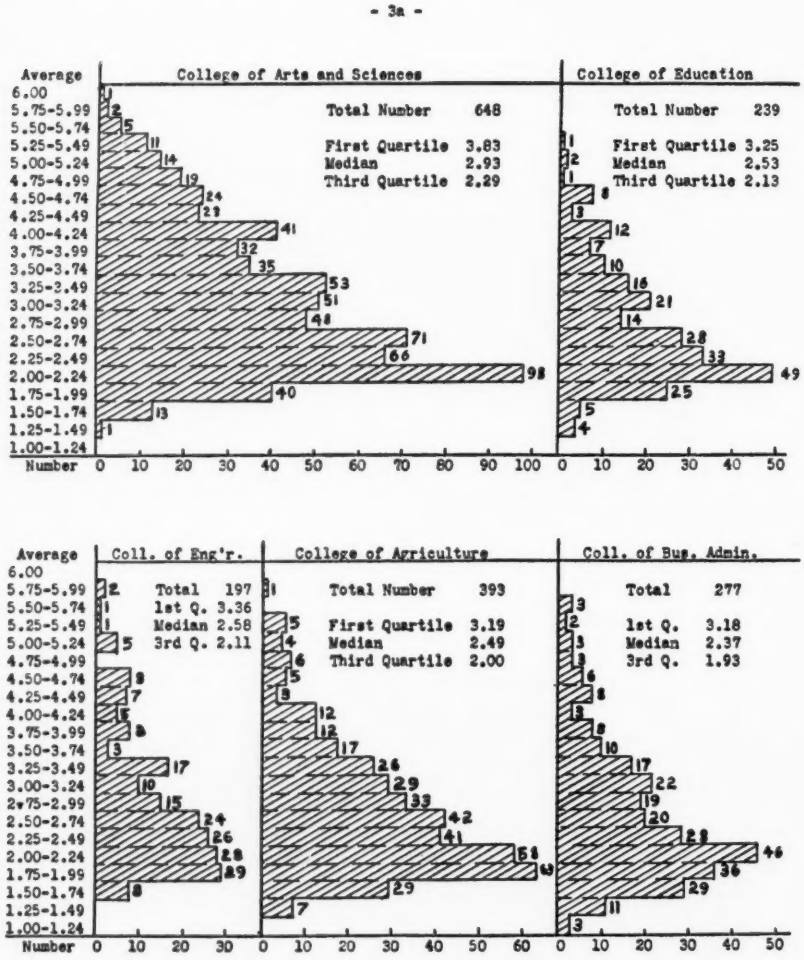

FIGURE 1. CUMULATIVE GRADE POINT AVERAGES OF STUDENTS GRADUATED 1934 TO 1939, INCLUSIVE

appear in the region of 3.00 and 4.00. The College of Business Administration, in spite of its minimum requirement of 1.50, also has its principal mode in the same interval. There are also traces of similar secondary modes, but not so well marked. The Colleges of Engi-

neering and Agriculture, with their 1.50 minimum requirement, show their principal mode in the interval from 1.75 to 1.99. The latter has no secondary mode except a slight trace in the neighborhood of 4.75. The former has one secondary mode in the interval from 3.25 to 3.49 and a rather unexpected grouping of cases from 3.75 to 4.74.

In an effort to explain the variations in median and quartile points between the colleges, a study was made of the psychological test scores which were available for some 700 of the graduates who entered

TABLE I

PERCENTAGE OF THE TOTAL NUMBER OF GRADUATES FROM EACH COLLEGE FOR WHOM TEST SCORES ARE AVAILABLE THAT RANKED IN EACH QUINTILE ON THE FRESHMAN PSYCHOLOGICAL TEST

	NUMBER OF STUDENTS	PERCENTAGE IN EACH QUINTILE				
		I	II	III	IV	V
Arts & Sciences	288	47.9	24.7	16.3	9.7	1.4
Education	77	20.8	26.0	18.2	23.4	11.7
Engineering	102	39.2	26.5	20.6	8.8	4.9
Agriculture	118	9.3	11.9	26.3	25.4	27.1
Business Admin.	123	26.0	27.6	22.8	17.1	6.5
UNIVERSITY	708	33.5	23.4	19.9	15.0	8.2

the University as freshmen and took the test at that time. Table I shows the total number of students graduating from each college for whom test scores were available and the percentage of this total that ranked in each quintile. Quintile I indicates the highest group.

An examination of this table gives some clue to the variations in median and quartile points, but far from a full explanation. For instance, the College of Arts and Sciences, which has the highest median in the grade averages, has by far the highest percentage of students ranking in the first and second quintiles on the psychological scores. Similarly the College of Engineering, which has the second highest median, has the second highest percentage in first and second quintiles. On the other hand, the College of Business Administration, which has the lowest median grade average, has the third highest percentage in first and second quintiles.

A further comment should perhaps be made with reference to the College of Agriculture, which shows over 50 per cent of its graduates ranking in the fourth and fifth quintiles. It is probable that the psychological test used is much better designed to measure those

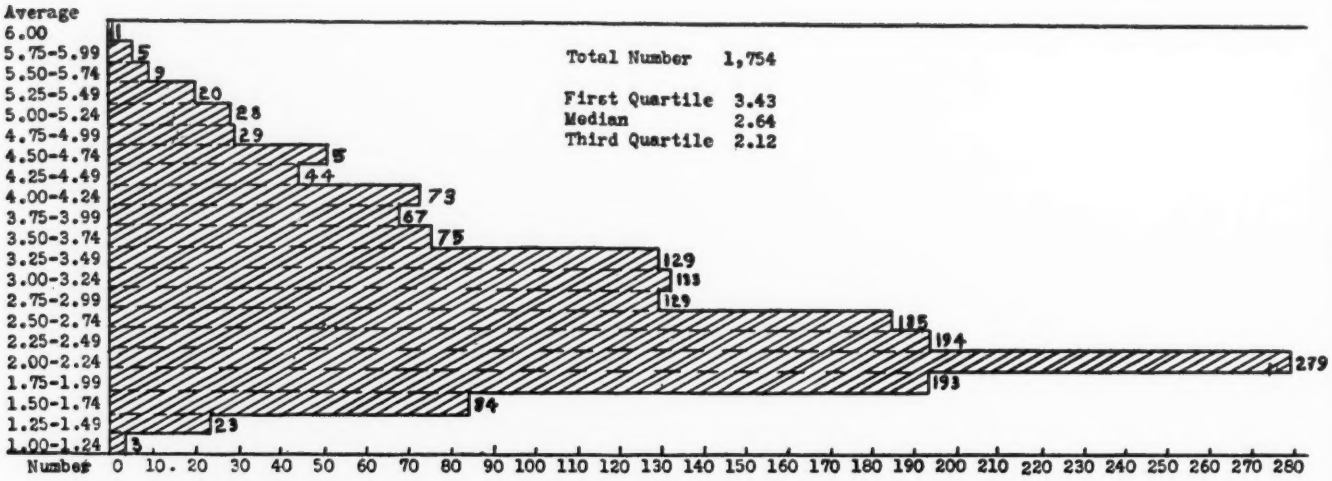

FIGURE 2. CUMULATIVE GRADE AVERAGES OF STUDENTS GRADUATED 1934 TO 1939, INCLUSIVE. ALL FOUR-YEAR COLLEGES

qualities which make for success in the academic field than in the vocational field of agriculture. If it were possible to design and use a test to measure the qualities necessary for success in the vocational field of agriculture, it is altogether likely that the students in the College of Agriculture would rank higher than those in the College of Arts and Sciences.

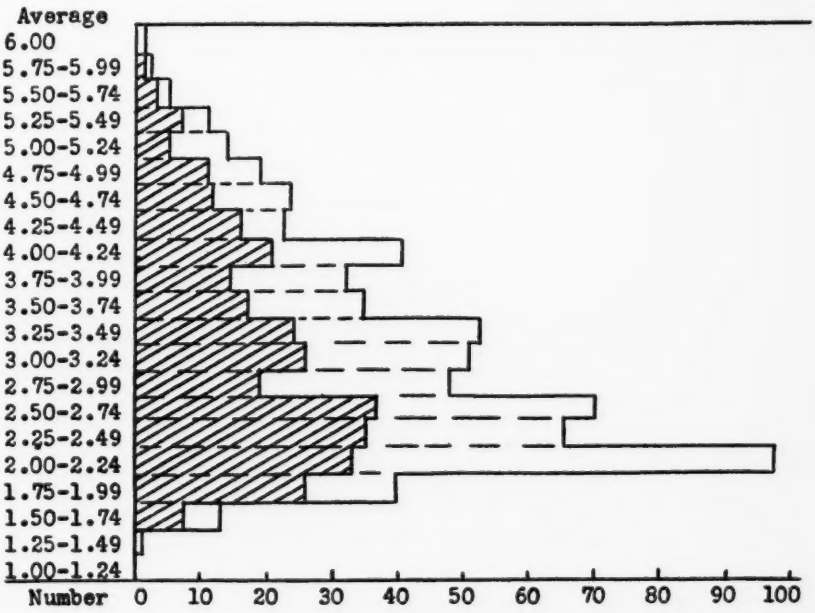

FIGURE 3. COMPARISON OF CUMULATIVE GRADE AVERAGES OF FOUR-YEAR GRADUATES AND OF ALL GRADUATES FROM THE COLLEGE OF ARTS AND SCIENCES, 1934 TO 1939, INCLUSIVE

Note: Shaded polygon represents those graduating after completing all four years of work in this university. Entire polygon represents all graduates from this college, including transfers.

Figure 2 shows the frequency polygon of cumulative averages for the whole group of graduates from all colleges combined. Here again, although the median is 2.64, there is a very decided mode in the interval from 2.00 to 2.24, while secondary modes are not marked. It is interesting to note the comparatively even distribution of cases in the group of intervals from 2.75 to 3.49 and again from 3.50 to 4.24, although this does not appear to have any particular significance or *raison d'être,* unless it is due to chance variations in marking.

Figure 3 shows for the College of Arts and Sciences a rather interesting comparison between the students who graduated after spending four years (or more) in this college and the total group of graduates (including also those who transferred here in the sophomore, junior, or senior years and who subsequently graduated). The smaller, shaded polygon represents the four-year students and the entire large polygon the whole group. Hence, the unshaded portion represents the transfer students alone. In the smaller polygon, the mode now appears in the interval from 2.50 to 2.74. The very decided mode in the interval from 2.00 to 2.24 for all graduates has entirely disappeared, although the secondary modes still appear at approximately the same points. This indicates that a considerable percentage of the transfer students who do graduate succeed in securing a cumulative grade point average only a little above the minimum graduation requirement of 2.00.

TABLE II

COMPARISON OF CRITICAL POINTS IN EARLIER AND PRESENT STUDY, AND ALSO IN EACH YEAR OF PRESENT STUDY

YEAR	FIRST QUARTILE	MEDIAN	THIRD QUARTILE
1927–1930	3.47	2.67	2.15
1934–1939	3.43	2.64	2.12
1934	3.63	2.82	2.19
1935	3.44	2.76	2.15
1936	3.39	2.67	2.15
1937	3.44	2.56	2.08
1938	3.23	2.44	2.05
1939	3.48	2.66	2.13

In the course of the investigation, similar comparative figures were constructed for the other colleges. In each case, however, the polygon for the four-year students follows so closely the same contour lines as that for all graduates that there is no need for presenting the figures here.

A similar study was made nine years earlier including the graduates for the years 1927-1930. A comparison of the critical points (median and quartile) in the two studies is given in Table II. This table also gives the critical points for each year covered by the present study.

It appears from this table that, although the distribution of grade averages does vary appreciably from year to year, a grouping of from four to six years gives a reasonably stable index against which to compare the attainment of any individual student. In fact, the differ-

ences in the critical points of the two studies, as shown in the first two lines of the table, are so slight as to be entirely negligible.

PART II

The second part of the study is concerned with the grade averages by classes of the same group of graduates. The data are presented in Table III. Columns 3, 4, 6, and 7 give the averages for the freshman, sophomore, junior, and senior years respectively. Column 8 gives the average on all courses carried in the freshman and sophomore years combined, and column 9 likewise in the junior and senior years. Column 10 is the cumulative average for the entire period in residence, and, as explained above, includes all courses carried except those which have been repeated because of earlier failure or low grade. The averages in columns 3 to 9 are not true cumulative averages in this respect, since they are based on a total of all the courses carried within the period designated, even though some courses may have been repeated within the same period. When a student attended for a period longer than four years, the first two years' work are designated as freshman and sophomore, and the last two as junior and senior. Any other work between these periods is thrown into the intermediate grouping and goes to make up the averages shown in column 5. Obviously only a few students had work falling into this group, largely poor students who could not finish in four years. The averages in this column, therefore, have no significance, but are included here merely for completeness.

The groupings shown in column 1 are for the most part self-explanatory. The students designated as irregular are those who did not remain in the University for all their work after they once entered, but who did some of the intermediate or later work elsewhere. The irregular group in the College of Arts and Sciences includes a number of students in the combined Arts and Medical curriculum who are permitted to substitute the first-year medical work for the senior year in the Arts College.

Here again, as would be expected from the showing in Part I, all averages for the College of Arts and Sciences are higher than the corresponding averages in the other colleges (except for the senior transfers in the College of Engineering, two students only). The greatest difference appears between the freshman year of the four-year students in Arts and Sciences and Agriculture.

Considering for a moment the four-year students, we notice a drop

TABLE III

GRADE POINT AVERAGES BY CLASSES, OF STUDENTS GRADUATED 1934–39

1	2	3	4	5	6	7	8	9	10
	Number	Fresh. Year	Soph. Year	Intermediate	Junior Year	Senior Year	Fresh. & Soph.	Junior & Sr.	Cumulative
College of Arts & Sciences									
Four-year Students	313	3.13	3.01	2.07	3.12	3.29	3.07	3.21	3.16
Sophomore Transfers	98		2.78		2.76	3.07	2.78	2.92	2.92
Junior Transfers	178				3.07	3.14			3.14
Senior Transfers	33					3.21			3.21
Irregular Students	26	3.33	2.93	1.04	3.18	3.96	3.03	3.35	3.23
Total	648	3.15	2.96	2.03	3.05	3.22	3.04	3.14	3.12
College of Education									
Four-year Students	110	2.40	2.39	1.35	2.49	2.89	2.40	2.69	2.57
Sophomore Transfers	30		2.53		2.54	3.08	2.53	2.80	2.82
Junior Transfers	72				2.65	2.98			2.84
Senior Transfers	24					3.13			3.13
Irregular Students	2	3.40	2.57		2.36	2.11	2.90	2.17	2.59
Total	238	2.42	2.42	1.35	2.55	2.96	2.42	2.77	2.68
College of Engineering									
Four-year Students	130	2.84	2.65	1.37	2.36	2.82	2.74	2.59	2.76
Sophomore Transfers	42		2.79		2.60	3.11	2.79	2.85	3.02
Junior Transfers	23				2.80	3.37			3.15
Senior Transfers	2					4.68			4.68
Irregular Students	0								
Total	197	2.84	2.68	1.37	2.47	2.97	2.75	2.73	2.84
College of Agriculture									
Four-year Students	153	2.24	2.34	1.37	2.53	2.91	2.29	2.71	2.56
Sophomore Transfers	45		2.51		2.73	2.82	2.51	2.77	2.75
Junior Transfers	178				2.62	2.80			2.77
Senior Transfers	16					3.01			3.01
Irregular Students	1	1.50			3.05	3.10	1.50	3.07	2.82
Total	393	2.24	2.37	1.37	2.60	2.85	2.31	2.75	2.66
College of Business Administration									
Four-year Students	152	2.34	2.42	1.36	2.63	2.85	2.38	2.74	2.61
Sophomore Transfers	44		2.14		2.23	2.58	2.14	2.41	2.42
Junior Transfers	70				2.59	2.90			2.77
Senior Transfers	10					2.85			2.85
Irregular Students	1	−0.27			2.35	2.22	−0.27	2.30	1.53
Total	277	2.33	2.37	1.36	2.55	2.82	2.35	2.70	2.61
All Colleges									
Four-year Students	858	2.70	2.65	1.55	2.73	3.02	2.68	2.87	2.82
Sophomore Transfers	259		2.57		2.61	2.91	2.57	2.76	2.79
Junior Transfers	521				2.78	2.98			2.92
Senior Transfers	85					3.15			3.15
Irregular Students	30	3.13	2.89	1.04	3.11	3.32	3.00	3.17	3.10
Total	1753	2.71	2.65	1.55	2.76	3.03	2.67	2.90	2.85

in grade average from the freshman to the sophomore year, shown in the totals for the whole group and for the first three colleges. In the College of Engineering the drop is the largest and carries through into the junior year. In this college, the average for the senior year barely reaches the freshman average, while the average for the junior and senior years combined is lower than for the freshman and sophomore years combined. In Arts and Sciences and Education the junior averages just about equal those for freshmen, and the senior averages are higher. In the Colleges of Agriculture and Business Administration the freshmen begin with comparatively low averages, a steady increase being shown through the four years.

In the sophomore transfers it appears that the sophomore and junior averages are very nearly equal. A slight drop in two of the colleges is offset by a small rise in the others, so that for the total of all sophomore transfers the junior average is almost the same as the sophomore average. The senior averages are all higher.

The junior transfers show uniformly an increase from the junior to the senior year. Furthermore, the junior transfers show in nearly all instances higher averages than the corresponding averages for the sophomore transfers, and in some cases higher than the corresponding averages for the four-year students.

In all instances except one (College of Business Administration), the senior transfers show higher averages than the corresponding averages for other groups of students.

SUMMARY

The data assembled in this study have provided a set of criteria against which the attainment of any individual student (senior or graduate) may be compared for the purpose of estimating his approximate rank in the graduating class at times when such information is not available for the specific class, but which is needed in connection with applications for fellowships, for admission to graduate schools, or for other purposes. The study is extensive enough to show that the criteria based on a grouping of several years' graduates are sufficiently stable for practical purposes.

The additional data presented, show that students who transfer in the senior year and succeed in graduating rank slightly higher than the "native" students; that those who transfer in the junior year rank approximately the same; and that those who transfer in the sophomore year rank lower.

JUNIOR COLLEGE GRADUATES VS. SENIOR COLLEGE JUNIORS

MAX FICHTENBAUM

THE PURPOSE of this investigation was to make a comparison of the scholastic performance in The University of Texas of (1) those students who entered the University as graduates of junior colleges and (2) those students who were juniors and who had done all of their work in the University. The records to be compared were (1) for the junior year of each group, and (2) for the session immediately following for those in each group who returned. No attempt was made to determine the reasons for and causes of any differences found; the investigation was primarily to determine what differences, if any, there were in the performance records of the two groups.

It would have been both interesting and desirable to have included in this study information about the relative abilities of the groups as shown by psychological tests, rank in high school class, previous college records, etc., in order to determine the extent to which the groups were of similar abilities. However, all of these data were not available in the records used, and no attempt was made to determine basic differences in the composition of the groups. This is, therefore, not a report on a controlled experiment, but simply a presentation of the data found when the records of the two groups were compared.

PROCEDURE

The records of all junior college graduates who entered the University in 1935-1936, 1936-1937, or 1937-1938 were included in this investigation. Similarly, the records of all students who were juniors during any one of the same three sessions and who had done all of their work in the University were included. The records of all students in either group who returned for the session immediately following the one in which first counted were included in the second year. For convenience the junior college graduates will hereafter be referred to as Group 1 and the University juniors as Group 2. The first or junior year for each group will be referred to as the "initial" year, and the session immediately following in each case will be called the "follow-up" year. As an illustration, if 1935-1936 was the

"initial" year for certain students, then the "follow-up" year for the same group would be 1936-1937; if 1936-1937 was the "initial" year, then 1937-1938 would be the "follow-up" year. Thus, there were three "initial" and three "follow-up" years involved.

The data for the two groups were broken down by sex and according to the various colleges and schools in which the students registered. Data concerning the quantity of work completed, quantity passed, quantity failed, distribution of grades, grade-point score, withdrawals from school, number completing normal loads, etc., have been tabulated, and comparisons for the two groups concerning these items are given.

Although the discussion deals primarily with the groups as a whole, compilations were made for men and women separately as well. Detailed data will be found in Tables IV, V, and VI. A comparison of the records by men and women indicates the same general trends as for the groups as a whole.

SIZE OF SAMPLE

The University of Texas admits a rather large number of college transfers each session and among these transfers the number of junior college graduates is relatively large. The records of 883 junior college graduates are involved in this investigation. Of these students, 690 (78 per cent) returned to the University for the session immediately following their first admission. During the same period the University had 1,689 students of junior classification, all of whose previous work had been done in this institution. Of these, 1,222 (72 per cent) returned for the session immediately following the one in which they were classified as juniors. The records of 2,572 students are involved for the "initial" years, and 1,912 students for the "follow-up" years.

Work in the Law School has certain variations from the other divisions, such as a smaller maximum load, a numerical grading system, etc., and these differences make it inadvisable to compare law records with others. Therefore the records of students in the Law School are not included in the comparisons in this investigation. The proportions of students from each group in the Law School are shown in Tables IV, V, and VI, but no other data concerning law students are given.

DISTRIBUTION BY SEX

On the whole, Group 2 had a greater proportion of men students than did Group 1. This was so both in the "initial" and in the "follow-up" years. The differences do not, however, seem to be of especial significance. In the "initial" years the proportions of men were as follows:

Group 1: 67.0, 67.4, 64.2 per cent;
Group 2: 70.1, 68.4, 72.9 per cent.

In the "follow-up" years the proportions were:

Group 1: 69.1, 69.1, 65.2 per cent;
Group 2: 70.0, 68.9, 73.6 per cent.

DIVISIONS IN WHICH REGISTERED

The distribution of the registration in the various colleges and schools for the different years will be found in Tables IV, V, and VI. It is of interest to note that in the "initial" years more than half of each group was registered in the College of Arts and Sciences. A somewhat larger proportion of Group 1 was registered in the academic division than was the case with Group 2. This indicates that a greater portion of Group 2 was registered in the various professional fields.

As might be expected, the proportion of women in each group who were registered in the academic division was greater than the proportion of men; and Group 1 women had a larger ratio of their group in the academic field in the "initial" years than did Group 2. The difference, however, is not of especial importance, and was probably caused by heavier registration of Group 2 in the School of Education.

In the "follow-up" years less than half of each group was registered in the College of Arts and Sciences. This was due to the shifting of the students to the professional fields. Although the proportion of women in each group who continued in the academic field was rather well in line with the ratio in the "initial" years, the preponderance of male registration reduced the total percentages in that division.

STUDENT LOAD

During the three "initial" years the average load carried by students in Group 2 was somewhat larger than for Group 1. The maximum difference, however, of .5 semester hour was not significant. However, in the "follow-up" years the average load for Group 1 was ma-

terially higher than for Group 2, the maximum difference being 1.9 semester hours. The average student loads in the "initial" years were:

Group 1: 29.2, 29.0, 29.4 semester hours;
Group 2: 29.4, 29.5, 29.9 semester hours.

During the "follow-up" years the average loads were:

Group 1: 29.6, 29.2, 29.3 semester hours;
Group 2: 27.7, 27.7, 27.9 semester hours.

QUANTITY OF WORK PASSED

In the matter of the average quantity of work passed per student, it was found that the average for Group 2 was larger than for Group 1 during the "initial" years, but lower for the "follow-up" years. The averages for the "initial" years were:

Group 1: 27.1, 25.6, 26.5 semester hours;
Group 2: 27.9, 27.6, 28.3 semester hours.

The averages for the "follow-up" years were:

Group 1: 28.0, 27.4, 27.3 semester hours;
Group 2: 26.7, 26.4, 26.5 semester hours.

It will be observed from these figures that the average passing load of Group 1 increased[1] in each of the "follow-up" years—0.9, 1.8, and 0.8 semester hours respectively, while the average for Group 2 decreased in each of these years.

STUDENTS RETURNING

It will be of interest to note the proportion of each group which returned to the University in each of the "follow-up" years, as shown

TABLE I

PERCENTAGE OF STUDENTS RETURNING FOR EACH "FOLLOW-UP" YEAR

RETURNED IN	GROUP 1			GROUP 2		
	Men Per Cent	Women Per Cent	Both Per Cent	Men Per Cent	Women Per Cent	Both Per Cent
1936–1937	80.7	73.2	78.2	73.6	74.1	73.8
1937–1938	78.5	72.7	76.6	72.0	70.3	71.5
1938–1939	80.9	77.5	79.6	72.6	70.5	72.0

in Table I. In general, a greater proportion of Group 1 returned than was the case in Group 2.

[1] The increased passing average may have resulted from the heavier load undertaken; also a year's experience in the University probably affected favorably the average passing load.

PASSING AND FAILING RATIOS

Passing. Both in the "initial" and in the "follow-up" years Group 2 passed a somewhat greater ratio of the work undertaken (dropped courses excluded) than did Group 1. During the "initial" years the proportions of work passed were:

Group 1: 92.8, 88.3, 90.3 per cent;
Group 2: 94.9, 93.6, 94.5 per cent.

In the "follow-up" years the ratios were:

Group 1: 94.9, 93.9, 93.0 per cent;
Group 2: 96.3, 95.2, 95.2 per cent.

Both groups showed improvement in the "follow-up" years. Group 1 increased its passing ratio during the three years by 2.1, 5.6, and 2.7

TABLE II

PROPORTION OF STUDENTS FAILING

	"INITIAL" YEARS		"FOLLOW-UP" YEARS	
	Group 1 Per Cent	Group 2 Per Cent	Group 1 Per Cent	Group 2 Per Cent
	1935–1936		1936–1937	
Failed 1–6 hrs. incl.	23.5	21.4	17.5	13.4
Failed 7–12 hrs. incl.	6.9	4.6	7.0	3.4
Failed more than 12 hrs.	1.8	0.7	1.0	0.7
	1936–1937		1937–1938	
Failed 1–6 hrs. incl.	25.1	17.9	20.8	18.3
Failed 7–12 hrs. incl.	10.9	8.3	5.9	5.0
Failed more than 12 hrs.	6.4	1.2	2.0	0.3
	1937–1938		1938–1939	
Failed 1–6 hrs. incl.	21.1	17.8	16.6	15.1
Failed 7–12 hrs. incl.	10.3	6.1	8.5	3.6
Failed more than 12 hrs.	4.4	1.9	3.0	2.1

per cent respectively, while Group 2 increased its passing ratio by 1.4, 1.6, and 0.7 per cent. The maximum variation in the passing ratios between the groups was 5.3 per cent in the "initial" years, but this was reduced in the "follow-up" years and the maximum variation was 2.2 per cent.

Failing. Conversely, both in the "initial" and in the "follow-up" years Group 1 had a higher ratio of failing work than Group 2. The failing ratios for the various years will be found in Tables IV, V, and VI.

Number of students failing. There is shown in Table II the proportion of each group which received failing grades in varying quantities of work.

A comparison of the failing records of the two groups as shown in Table II reveals that a smaller proportion of Group 2 failed in varying quantities of work than was the case in Group 1.

QUALITY OF WORK

Grades. The distribution of all grades received, based on all work undertaken (dropped courses excluded) is shown in Table III.

TABLE III

GRADE DISTRIBUTION

GRADE	"INITIAL" YEARS		"FOLLOW-UP" YEARS	
	Group 1 Per Cent	Group 2 Per Cent	Group 1 Per Cent	Group 2 Per Cent
	1935–1936		1936–1937	
A	12.9	16.4	17.3	22.3
B	29.0	34.4	34.0	37.0
C	34.6	30.8	31.6	27.3
D	16.3	13.3	12.0	9.7
Fail	7.2	5.1	5.1	3.7
	1936–1937		1937–1938	
A	12.3	18.6	16.2	22.4
B	27.1	33.4	33.2	36.6
C	31.0	29.0	31.6	27.0
D	17.9	12.6	12.9	9.2
Fail	11.7	6.4	6.1	4.8
	1937–1938		1938–1939	
A	12.6	19.0	16.1	21.5
B	28.5	33.3	36.0	35.9
C	33.0	29.7	29.2	27.1
D	16.2	12.5	11.7	10.7
Fail	9.7	5.5	7.0	4.8

An examination of Table III shows that of the grades received, Group 2 had a greater proportion of honor grades (A's and B's) both in the "initial" and in the "follow-up" years than did Group 1. The proportions of honor grades received by each group in the "initial" years were:

Group 1: 41.9, 39.4, 41.1 per cent;
Group 2: 50.8, 52.0, 52.3 per cent.

Corresponding data for the "follow-up" years were:

Group 1: 51.3, 49.4, 52.1 per cent;
Group 2: 59.3, 59.0, 57.4 per cent.

Grade-point score. The grade-point score indicates quality of performance. In determining this score each semester hour of *A* grade is assigned a value of three points; each hour of *B,* two points;

each hour of *C*, one point; *D* grades and failing grades, zero points. The total points earned by each group is divided by the total number of hours undertaken, and the quotient is the grade-point score.

A comparison of the grade-point scores for the two groups shows a higher average score for Group 2 both in the "initial" years and in the "follow-up" years. The difference in the scores, however, was somewhat less for the "follow-up" years than for the "initial" years. The average grade-point scores for the "initial" years were:

Group 1: 1.313, 1.220, 1.279;
Group 2: 1.490, 1.516, 1.533.

The average grade-point scores for the "follow-up" years were:

Group 1: 1.515, 1.464, 1.497;
Group 2: 1.682, 1.674, 1.633.

B or higher students. The number of students in each group all of whose grades were *B* or higher was also checked. Group 2 had a greater proportion of such students than Group 1. The ratio of these students in the "initial" years were:

Group 1: 8.1, 8.1, 6.6 per cent;
Group 2: 11.0, 11.4, 13.4 per cent.

In the "follow-up" years the proportions were:

Group 1: 10.5, 8.4, 10.6 per cent;
Group 2: 15.2, 15.5, 12.1 per cent.

SUMMARY

In summarizing the data presented, it was noted that a somewhat greater proportion of Group 1 students returned for the "follow-up" years than did those from Group 2. It was also observed that the two groups carried substantially similar average loads in the "initial" years but that Group 1 students carried heavier average loads in the "follow-up" years. Although the average passing load for Group 1 students was less than that for Group 2 students in the "initial" years, this trend was reversed in the "follow-up" years, and the students in Group 1 increased their average passing load while those in Group 2 showed a decreased average. Group 2 students passed a greater proportion of the work undertaken than did the students in Group 1, and furthermore had a smaller proportion of their group who failed courses. Group 2 students also had better performance records than Group 1 students on all of the various quality items investigated.

Table 4

PERFORMANCE IN THE UNIVERSITY OF TEXAS OF JUNIOR COLLEGE GRADUATE TRANSFERS AND UNIVERSITY OF TEXAS JUNIORS
FOR THE SESSIONS OF 1935-1936 AND 1936-1937

	Junior College Graduate Transfers						University of Texas Juniors					
	Juniors of 1935-36			Returned in 1936-37			Juniors of 1935-36			Returned in 1936-37		
	Men	Women	Both	Men	Women	Both	Men	Women	Both	Men	Women	Both
Total number of students registered	197	97	294	159	71	230	345	147	492	254	109	363
Percentage in College of Arts and Sciences	49.8	75.2	58.2	30.8	67.6	42.2	44.9	70.7	52.7	28.0	71.6	41.1
" " School of Business Administration	22.3	9.3	18.0	34.6	14.1	28.3	18.0	9.5	15.4	18.1	6.4	14.6
" " School of Education	0.5	12.4	4.4	1.9	15.5	6.1	2.3	15.0	6.1	2.0	13.8	5.5
" " College of Engineering	16.2	2.1	11.6	13.9	1.4	10.0	17.4	3.4	13.2	19.7	3.7	14.9
" " School of Law	10.2	1.0	7.1	18.2	1.4	13.0	16.2	0.7	11.6	27.9	1.8	20.1
" " College of Pharmacy	1.0	0.0	0.7	0.6	0.0	0.4	1.2	0.7	1.0	0.8	0.9	0.8
" " Graduate School	--	--	--	--	--	--	--	--	--	3.5	1.8	3.0
Of first year's group, percentage returning next session	--	--	--	80.7	73.2	78.2	--	--	--	73.6	74.1	73.8
(Law students are omitted in the following)												
Number semester hours completed (passed or failed)	4583	2569	7152	3552	1974	5526	7782	3855	11637	4553	2797	7350
Percentage of hours passed	92.3	93.7	92.8	94.2	96.2	94.9	94.2	96.4	94.9	94.8	98.7	96.3
" " " failed	7.7	6.3	7.2	5.8	3.8	5.1	5.8	3.6	5.1	5.2	1.3	3.7
" " " with Grade A	13.1	12.5	12.9	18.0	16.0	17.3	14.7	19.9	16.4	21.3	24.1	22.3
" " " " B	27.8	31.2	29.0	32.0	37.0	34.0	33.4	36.5	34.4	34.7	40.6	37.0
" " " " C	34.6	34.7	34.6	31.2	32.4	31.6	32.7	27.0	30.8	27.1	27.7	27.3
" " " " D	16.8	15.3	16.3	12.7	10.8	12.0	13.4	13.0	13.3	11.7	6.3	9.7
Average number sem. hours completed per student per year	29.0	29.5	29.2	29.2	30.1	29.6	29.5	29.2	29.4	28.0	27.3	27.7
" " " " " passed	26.8	27.7	27.1	27.5	29.0	28.0	27.8	28.1	27.9	26.5	26.9	26.7
Average grade-point score	1.295	1.346	1.315	1.498	1.545	1.515	1.437	1.596	1.490	1.603	1.811	1.682
Percentage of students with all grades B or higher	8.5	7.3	8.1	11.5	8.6	10.5	8.3	16.4	11.0	13.7	17.8	15.2
" " " who withdrew during session	9.0	16.8	12.0	4.2	5.7	6.0	11.1	11.6	11.3	11.5	3.7	8.6
" " " failing 1-3 sem. hours inclusive	13.0	17.7	14.7	13.1	12.9	13.0	15.9	11.6	14.5	11.5	3.7	8.6
" " " " 4-6 " " "	9.6	7.3	8.8	3.8	5.7	4.5	7.6	5.5	6.9	6.0	2.8	4.8
" " " " 7-9 " " "	4.0	4.2	4.0	6.9	2.9	5.5	2.4	2.1	2.3	3.5	0.9	2.4
" " " " 10-12 " " "	3.4	2.1	2.9	1.5	1.4	1.5	2.8	1.4	2.3	1.6	0.0	1.0
" " " more than 12 semester hours	2.3	1.0	1.8	1.5	0.0	1.0	1.0	0.0	0.7	1.1	0.0	0.7
" " " some work	32.2	32.3	32.2	26.9	22.9	25.5	30.0	20.5	26.7	23.5	7.5	17.6

Table 5

PERFORMANCE IN THE UNIVERSITY OF TEXAS OF JUNIOR COLLEGE GRADUATE TRANSFERS AND UNIVERSITY OF TEXAS JUNIORS FOR THE SESSIONS OF 1936-1937 AND 1937-1938

	Junior College Graduate Transfers						University of Texas Juniors					
	Juniors of 1936-37			Returned in 1937-38			Juniors of 1936-37			Returned in 1937-38		
	Men	Women	Both	Men	Women	Both	Men	Women	Both	Men	Women	Both
Total number of students registered	205	99	304	161	72	233	357	165	522	257	116	373
Percentage in College of Arts and Sciences	51.7	79.8	60.8	39.1	70.8	48.9	40.6	72.7	50.8	23.0	67.2	36.7
" " School of Business Administration	14.6	8.1	12.5	16.8	9.7	14.6	19.0	12.1	16.9	24.1	18.1	22.2
" " School of Education	0.5	12.1	4.3	0.6	19.5	6.4	2.0	14.6	5.9	1.2	11.2	4.3
" " College of Engineering	22.0	0.0	14.8	23.0	0.0	15.9	24.4	0.6	16.8	26.8	0.9	18.8
" " School of Law	10.2	0.0	6.9	19.3	0.0	13.3	11.2	0.0	7.7	19.1	0.9	13.4
" " College of Pharmacy	1.0	0.0	0.7	1.2	0.0	0.9	2.8	0.0	1.9	3.9	0.0	2.7
" " Graduate School	--	--	--	--	--	--	--	--	--	1.9	1.7	1.9
Of first year's group, percentage returning next session	--	--	--	78.5	72.7	76.6	--	--	--	72.0	70.3	71.5
(Law students are omitted in the following)												
Number semester hours completed (passed or failed)	4964	2628	7592	3496	2027	5523	8228	4652	12880	5130	3009	8139
Percentage of hours passed	85.4	93.6	88.3	92.4	96.4	93.9	92.2	96.2	93.6	93.9	97.5	95.2
" " " failed	14.6	6.4	11.7	7.6	3.6	6.1	7.8	3.8	6.4	6.1	2.5	4.8
" " " with Grade A	11.2	14.3	12.3	14.8	16.4	16.2	18.9	18.0	18.6	21.1	24.6	22.4
" " " " " B	24.8	31.5	27.1	30.8	37.2	33.2	31.4	37.0	33.4	33.8	41.3	36.6
" " " " " C	30.3	32.2	31.0	32.4	30.3	31.6	28.5	30.1	29.0	28.6	24.3	27.0
" " " " " D	19.1	15.6	17.9	14.4	10.4	12.9	13.4	11.1	12.6	10.4	7.3	9.2
Average number sem. hours completed per student per year	29.0	29.0	29.0	28.9	29.8	29.2	29.5	29.4	29.5	27.8	27.6	27.7
" " " " passed " " " "	24.8	27.2	25.6	26.7	28.7	27.4	27.2	28.2	27.6	26.1	26.9	26.4
Average grade-point score	1.135	1.379	1.220	1.384	1.602	1.464	1.480	1.580	1.516	1.595	1.808	1.674
Percentage of students with all grades B or higher	6.5	11.1	8.1	8.5	8.3	8.4	10.4	13.3	11.4	12.3	20.9	15.5
" " " who withdrew during session	10.3	9.1	9.9	8.5	4.2	6.9	14.5	4.8	11.2	8.0	2.6	6.2
" " " failing 1-3 sem. hours inclusive	15.8	9.1	13.4	13.8	6.9	11.4	10.7	9.7	10.4	14.2	7.0	11.8
" " " " 4-6 " " "	12.5	10.1	11.7	8.5	11.1	9.4	8.2	6.1	7.5	8.5	2.6	6.5
" " " " 7-9 " " "	9.8	1.0	6.7	7.7	0.0	4.9	6.9	3.6	5.8	3.8	0.9	2.8
" " " " 10-12 " " "	4.9	3.0	4.2	0.8	1.4	1.0	3.2	1.2	2.5	2.4	1.7	2.2
" " " " more than 12 semester hours	8.1	3.0	6.4	3.1	0.0	2.0	1.9	0.0	1.2	0.5	0.0	0.3
" " " " some work	51.1	26.3	42.4	33.8	19.4	28.7	30.9	20.6	27.4	29.2	12.2	23.5

Table 6

PERFORMANCE IN THE UNIVERSITY OF TEXAS OF JUNIOR COLLEGE GRADUATE TRANSFERS AND UNIVERSITY OF TEXAS JUNIORS FOR THE SESSIONS OF 1937-1938 AND 1938-1939

	Junior College Graduate Transfers						University of Texas Juniors					
	Juniors of 1937-38			Returned in 1938-39			Juniors of 1937-38			Returned in 1938-39		
	Men	Women	Both	Men	Women	Both	Men	Women	Both	Men	Women	Both
Total number of students registered	183	102	285	148	79	227	492	183	675	357	129	486
Percentage in College of Arts and Sciences	53.0	85.3	64.6	34.5	74.7	48.5	40.2	78.7	50.7	24.9	67.4	36.2
" " School of Business Administration	18.0	9.8	15.1	27.0	15.2	22.9	18.3	9.6	16.0	19.3	14.7	18.1
" " School of Education	1.6	4.9	2.8	1.4	10.1	4.4	1.2	9.3	3.4	1.1	11.7	3.9
" " College of Engineering	19.1	0.0	12.3	16.9	0.0	11.0	19.9	0.5	14.7	23.8	0.8	17.7
" " School of Law	7.7	0.0	4.9	18.9	0.0	12.3	16.7	1.1	12.4	26.1	2.3	19.8
" " College of Pharmacy	0.6	0.0	0.3	1.3	0.0	0.9	3.7	0.6	2.8	3.7	0.8	2.9
" " Graduate School	--	--	--	--	--	--	--	--	--	1.1	2.3	1.4
Of first year's group, percentage returning next session	--	--	--	80.9	77.5	79.6	--	--	--	72.6	70.5	72.0
(Law students are omitted in the following)												
Number semester hours completed (passed or failed)	4477	2838	7315	3285	2252	5537	11582	5095	16677	6827	3225	10052
Percentage of hours passed	88.8	92.7	90.3	91.3	95.6	93.0	94.4	94.8	94.5	94.1	97.5	95.2
" " " failed	11.2	7.3	9.7	8.7	4.4	7.0	5.6	5.2	5.5	5.9	2.5	4.8
" " " with Grade A	13.7	11.0	12.6	17.9	13.5	16.1	19.0	19.0	19.0	19.7	25.2	21.5
" " " " " B	26.6	31.6	28.5	33.2	40.3	36.0	32.4	35.3	33.3	33.7	40.3	35.9
" " " " " C	33.1	32.7	33.0	28.8	29.6	29.2	29.9	29.4	29.7	28.6	24.2	27.1
" " " " " D	15.4	17.4	16.2	11.4	12.2	11.7	13.1	11.1	12.5	12.1	7.8	10.7
Average number sem. hours completed per student per year	29.6	29.0	29.4	29.2	29.4	29.3	30.2	29.3	29.9	28.0	27.6	27.9
" " " " passed " " " "	26.3	26.8	26.5	26.7	28.1	27.3	28.5	27.8	28.3	26.4	26.9	26.5
Average grade-point score	1.273	1.288	1.279	1.489	1.507	1.497	1.517	1.569	1.533	1.552	1.804	1.633
Percentage of students with all grades B or higher	7.7	4.9	6.6	10.8	10.1	10.6	12.9	14.4	13.4	10.6	15.1	12.1
" " " who withdrew during session	13.0	5.9	10.3	5.0	1.3	3.5	8.5	5.5	7.6	8.3	4.8	7.2
" " " failing 1-3 sem. hours inclusive	11.8	6.9	10.0	10.8	8.9	10.1	11.7	12.7	12.0	10.2	8.7	9.7
" " " " 4-6 " " "	10.1	12.7	11.1	7.5	5.1	6.5	6.1	5.0	5.8	6.4	3.2	5.4
" " " " 7-9 " " "	7.1	3.9	5.9	8.3	3.8	6.5	4.1	2.2	3.6	3.4	2.4	3.1
" " " " 10-12 " " "	4.7	3.9	4.4	2.5	1.3	2.0	2.2	3.3	2.5	0.8	0.0	0.5
" " " " more than 12 semester hours	5.9	2.0	4.4	4.2	1.3	3.0	2.0	1.7	1.9	3.0	0.0	2.1
" " " " some work	39.6	29.4	35.8	33.3	20.3	28.1	26.1	24.9	25.7	23.9	14.3	20.8

CONCLUSION

The findings in this investigation lead to the conclusion that the graduates of junior colleges who came to The University of Texas during the years investigated carried as heavy or heavier average loads than did students of similar rank who had all of their previous college training in the University, and that after a year's experience in the University the average passing load was materially greater for the junior college graduates. However, even though the junior college graduates carried heavier average loads and had larger average passing loads than did the University juniors, the latter group had a better quality performance record. This was shown by higher average grade-point scores, larger proportions of honor grades received, higher average passing ratios, and larger proportions of "*B* or higher students." The differences between the groups in the quality ratios, however, tended to be less in what might be called the senior years than in the junior years, after the junior college graduates had adjusted themselves to University life.

—*Volume 16, Number 2*

DO HIGH-SCHOOL STUDENTS WHO STUDY A FOREIGN LANGUAGE ACQUIRE LARGER VOCABULARIES, SPELL THEIR WORDS MORE CORRECTLY AND USE BETTER ENGLISH THAN HIGH-SCHOOL STUDENTS WHO STUDY NO FOREIGN LANGUAGE?

ROY B. HACKMAN AND HENRY W. DUEL

A NUMBER of investigations have been made concerning the effect of foreign language study on achievement in English. Since a comprehensive summary of these investigations is given by Reed in his *Psychology and Teaching of Secondary School Subjects,* only the main conclusions will be cited here.[1] These investigations indicate: (1) the study of Latin increases a student's knowledge of English words of Latin origin and his ability to spell them; (2) the study of a modern foreign language, such as French, is of very little assistance to a student in increasing his English vocabulary; (3) the study of a foreign language has only a slightly beneficial effect upon a student's ability to use English; (4) the study of a modern foreign language is of assistance to the superior student in his study of English; it is a hindrance, however, to the student of low ability.

Although these investigations seem to show that the study of a foreign language has little effect on a student's knowledge of English, two factors render such a conclusion questionable. First, these studies were carried on for comparatively short periods of time; the longest time interval involved was a single school year. Second, when groups were equated, mental ability ratings, initial scores on achievement tests and similar criteria were used; little or no attempt was made to take into consideration such factors as studiousness, socio-economic status, out-of-school employment, participation in extra-curricular activities and various personality traits, all of which may be related to scholastic achievement.

The present investigation attempts to obviate, to some extent, the above-mentioned defects in the earlier studies. Specifically, the purpose

[1] Homer B. Reed, *Psychology and Teaching of Secondary-School Subjects.* New York: Prentice-Hall, Inc., 1939.

of this study is to determine whether or not the study of French, German, Latin, or Spanish has a significant influence upon the size of a student's English vocabulary, his skill in spelling English words, and his ability to use good English.

A group of students was given the Co-operative English Test, Form 5,[2] during the second semester of the sophomore year and again approximately two years later during the second semester of the senior year; thus the time interval involved was more than twice the period covered by any of the earlier investigations. During this two year period in high school some of the students studied no foreign language. Others studied a foreign language, such as Latin, in addition to English. Specifically, 154 studied no foreign language, 85 studied English and French, 26 studied English and German, 37 studied English and Latin, and 44 studied English and Spanish. Students who took more than one foreign language were not included.

The high school centile rank was used as a criterion for equating groups. The centile rank does not measure directly a student's ability, his industry, the conditions in his home, the time he devotes to study, his personality traits and other factors which influence his achievement in high school. It seems obvious that they are all reflected, to some extent at least, in this rank; for this reason the centile was used as a basis for equating groups.

RESULTS

The high school rank of each student was converted to a standard score from the original centile rank and used in subsequent calculations. The mean high school rank and the mean scores on the pretest and final test for each group are shown in Table I. It is apparent that the groups differ considerably in their average scholarship as estimated by the high school rank, the English group (no foreign language studied) being the lowest. This fact must be taken into account in analyzing the gains in English, since gain in Usage, Spelling and Vocabulary may be associated with general intelligence and scholarship rather than any particular kind of educational experience. Inspection of Table I reveals rather large gains in Usage, Vocabulary and Total score, but small gains in Spelling. It is also apparent that the groups differ among themselves as regards the amount of gain over the two-year period. However, the mean gain in English Usage

[2] The Co-operative English Test yields separate part scores for (1) Usage; (2) Vocabulary; and (3) Spelling.

TABLE I

COMPARISON OF MEAN INITIAL AND FINAL SCORES FOR THE VARIOUS CLASSIFICATION GROUPS

GROUP	N	H. S. RANK	USAGE		VOCABULARY		SPELLING		TOTAL SCORE	
			I†	II⁰	I	II	I	II	I	II
English	154	46.8	47.7	54.8	19.8	28.1	21.0	20.8	88.5	103.7
French	85	52.7	62.7	76.9	27.7	36.5	28.3	29.3	118.7	142.6
German	26	54.8	66.9	77.4	34.0	43.8	31.0	31.2	132.0	152.4
Latin	37	53.8	64.8	74.3	29.6	38.0	29.6	32.0	124.0	144.2
Spanish	44	49.7	51.0	65.8	25.9	32.9	23.4	24.2	100.4	122.8
Pooled	346		55.1	65.4	24.6	33.0	24.8	25.3	104.5	123.7

† Pre-test.
⁰ Final Test.

for the total group (10.3 points) may be the result of a rather large gain in one group which masks the fact that other groups studied made no significant gain during the same period. On the other hand there may be a significant gain in each of the groups studied. Analyses of such differences between groups is an integral part of this study.

TABLE II

COMPARISON OF MEAN GAINS FOR THE CLASSIFICATION GROUPS

GROUP	USAGE SCORE				VOCABULARY SCORE		
	N	Mean	t†	P‡	Mean	t	P
English only	154	7.12±1.25*	5.70	<.01	8.29± .75	11.05	<.01
French	85	14.18±1.58	8.98	<.01	8.81± .88	10.01	<.01
German	26	10.54±3.04	3.47	<.01	9.76±1.58	6.18	<.01
Latin	37	9.49±2.52	3.76	<.01	8.35±1.70	4.91	<.01
Spanish	44	14.73±1.88	7.83	<.01	6.97±1.77	3.94	<.01
Pooled	346	10.34± .82	12.60	<.01	8.37± .51	16.41	<.01

GROUP	SPELLING SCORE				TOTAL SCORE		
	N	Mean	t	P	Mean	t	P
English only	154	.21± .77	.27	>.05	15.21±1.84	8.27	<.01
French	85	1.01±1.04	.97	>.05	24.03±2.22	10.82	<.01
German	26	.15±1.30	.12	>.05	20.26±3.37	6.07	<.01
Latin	37	2.40±1.29	1.56	>.05	20.24±3.48	5.82	<.01
Spanish	44	.73±1.54	.48	>.05	22.45±3.33	6.74	<.01
Pooled	346	.52± .50	1.03	>.05	19.23±1.17	16.44	<.01

* S. E. of Difference.
† Student's *t* for matched groups.
‡ Probability of getting such a *t* in the same direction.

The mean gains for each group are shown in Table II. With the exception of the Spelling scores, the mean gains for each group are rather large and in the expected direction. Since the groups are small, and since the initial and final scores are correlated, "Student's" *t* for matched groups was used to test the statistical significance of the gains. With the exception of Spelling, the mean gains are statistically significant in the sub-groups and also for the total group. This leads us to conclude that the growth in English ability during the last two years in high school (as measured by the Co-operative English Test) was significant.

The reader who expects to find rather marked variation in the amounts of gain in the sub-groups will be disappointed by the results obtained in this study. The amount of gain in Usage score appears to vary with the group studied, but that for Vocabulary does not. Since the gains in Spelling are not statistically significant within the separate groups, there is little point in comparing the groups to each other. There is some variation in gain in total score, especially when the English group is compared with the others (i.e. students taking English only gained less than students who also took a foreign language).

Before comparing the results obtained for students who studied a foreign language to those for students who took no foreign language, we should test the significance of the variation among the groups on the various tests. If the groups do not differ significantly among themselves, there is no point in making individual comparisons, and our conclusion would be that within the limits of the present investigation the type of educational experience, as regards language studied in high school, has no effect on achievement in English during the two-year period.

Our hypothesis is that the sub-groups are random samples from a homogeneous population (the total group). The *analysis of variance* is the appropriate procedure to test whether or not the variation among the group means is significantly greater than the variation within the groups.[3]

[3] G. W. Snedecor, *Calculation and Interpretation of Analysis of Variance and Co-variance.* Ames, Iowa: Collegiate Press, 1934, pp. 96.

Do the sub-groups (students of German, students of French, etc.) differ significantly in mean score at the end of the sophomore year?

Table III shows that the differences between the groups are highly significant on each test.[4] It follows then, that students in the sub-groups were not equally good English students before they were ex-

TABLE III

RESULTS OF ANALYSES OF VARIANCE TO TEST THE SIGNIFICANCE OF VARIATION IN GROUP MEANS ON INITIAL SCORES ON THE COOPERATIVE ENGLISH TEST AT THE END OF THE SOPHOMORE YEAR

VARIABLE	VARIATION BETWEEN MEANS OF GROUPS		REMAINDER* (ERROR)		TEST OF SIGNIFICANCE	
	df	Mean Square	df	Mean Square	F	P
Score on Usage	4	5317.99	341	54.26	98.01	<.01
Score on Vocabulary	4	1907.05	341	173.40	11.00	<.01
Score on Spelling	4	1303.85	341	126.69	10.29	<.01
Total Scores	4	22760.40	341	1362.89	16.70	<.01

* Residual variation within the groups.

posed to additional English and a foreign language during the last two years in high school. In other words, the groups were not equated for initial status.

Do the sub-groups differ significantly in mean score at the end of the senior year?

Table IV shows that the groups differ significantly on each test. It is interesting to note that not only do the groups differ significantly among themselves, but their relative positions on pretest and final test remain approximately constant—this ranking being almost identical with that for scholarship as measured by high school rank.[5]

[4] Each comparison is made by dividing the mean square (variance) for "between means of groups" by the mean square for the remainder (within groups). The ratio obtained (called F) is tested for significance by consulting Snedecor's *F* Table. If the probability of its occurrence by errors of random sampling (P in Table III) is less than one in a hundred times (< .01), the variation among sample means (language groups in this case) is considered highly significant.

[5] Cf. Table I.

TABLE IV

RESULTS OF ANALYSES OF VARIANCE TO TEST THE SIGNIFICANCE OF VARIATION IN GROUP MEANS ON FINAL SCORES ON THE COOPERATIVE ENGLISH TEST AT THE END OF THE SENIOR YEAR

VARIABLE	VARIATION BETWEEN MEANS OF GROUPS		REMAINDER (ERROR)		TEST OF SIGNIFICANCE	
	df	Mean Square	df	Mean Square	F	P
Score on Usage	4	8817.32	341	423.06	20.84	<.01
Score on Vocabulary	4	2164.57	341	248.96	8.69	<.01
Score on Spelling	4	1781.70	341	160.28	11.12	<.01
Total Scores	4	32294.07	341	1635.17	19.75	<.01

Do the sub-groups differ significantly in the amount of gain between the sophomore and senior years?

Turning to the gains in English over the two-year period, we find a different story. Table V sets forth the results of the analyses of variance for gains. The groups differ significantly in gain in Usage

TABLE V

RESULTS OF ANALYSES OF VARIANCE FOR GAINS AMONG THE CLASSIFICATION GROUPS ON THE TOTAL TEST AND SUB-TESTS

VARIABLE	VARIATION BETWEEN MEANS OF GROUPS		REMAINDER (ERROR)		TEST OF SIGNIFICANCE	
	df	Mean Square	df	Mean Square	F	P
Gains in Usage Score	4	931.75	341	222.74	4.1831	<.01
Gains in Vocabulary Score	4	38.48	341	88.86	2.3092	>.05
Gains in Spelling Score	4	59.75	341	87.21	1.4595	>.05
Gains in Total Score	4	1006.08	341	467.95	2.1499	>.05

score over the two-year period, but there are no significant differences among the sub-groups for mean gain in Vocabulary, Spelling and total scores.[6] Thus, there is association between foreign language studied and gain in English Usage, but no association between foreign language studied and gain or loss in either Vocabulary or Spelling. Whether or not the observed relationship is a causal one is open to question. It is entirely possible that the differential gain in Usage score is a function of either (1) scholarship (level of total achieve-

[6] Cf. Table II.

ment), or (2) initial status in each group (correlation of initial scores with final status and/or gain).

By means of the *analysis of co-variance* we can adjust (in effect, equate) the groups to the same level of scholarship or initial score and then test the significance of the variation among the group means. Such a procedure would be necessary if a high correlation between scholarship and gain or final status were present; since the gain may be a reflection merely of the general scholarship of the student, rather than courses taken by him. If the differences between *adjusted* mean scores in Usage are no longer significant, we know that the scholarship or initial status, as the case may be, is responsible for apparent differences in gain in Usage score. The correlation between scholarship and gain in Usage score is so low (+.128), that it is not surprising to find that the differences in adjusted mean gains in Usage are still highly significant. A like result is obtained when mean gains are adjusted for initial Usage score; the correlation in this case being (—.110). Thus we find that general scholarship and initial status in English Achievement, are not related to gain in English.

Within the limits of this study, then, we may conclude that the gain in English Usage score is significantly different for the groups studied, even when they are equated statistically for scholarship and initial status. The group that studied no foreign language gained the least; this mean gain being significantly less than the gain for all the other groups pooled together (Mean difference = 5.79 ±1.63). Students who studied French and Spanish gained more than those who studied German and Latin (see Table II).

That we have a highly reliable measure of English ability (Usage, Spelling, and Vocabulary) is indicated by the correlations between initial and final scores for the group of 346 students. These correlations are as follows: for Usage, r = .753 ±.02; for Vocabulary, r = .822 ±.02; for Spelling, r = .733 ±.07; for Total Score, r = .847 ±.02. The correlation between scholarship and final total English score was +.568, but that between scholarship and gains in total score was only +.122.

The pertinent findings of the present investigation are as follows:

1. Over a two-year period, a group of 346 high school students made significant mean gains in English Usage, Vocabulary, and Total Score on the Co-operative English Test. There was no gain in Spelling.
2. Groups composed of students who studied English only, or English in addition to French, German, Latin or Spanish, differed signifi-

cantly in scholarship, initial status and final status on the Co-operative English Test.

3. The groups studied differed significantly in mean gain in English Usage, but not in Vocabulary, Spelling or total score.
4. As regards gain in English Usage, the study of a foreign language appears to affect the amount of gain positively. Pupils who studied only English gained significantly less than those who studied a foreign language. Greater gain is associated with the study of French and Spanish as compared with Latin and German. The differential gain in English Usage is not associated with differences in the scholarship or initial status for the groups studied.
5. The study of a foreign language in high school appears to have no bearing on gains in Vocabulary or Spelling. The students gained about the same in vocabulary score, regardless of which language was taken. There was no gain in Spelling score during the last two years in high school.

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A COMPARISON OF THE ACADEMIC RECORDS OF THE CLASSES OF JUNE 1929 AND JUNE 1937, COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS, UNIVERSITY OF MICHIGAN

ROBERT L. WILLIAMS

I. THE PROBLEM

IN 1938 William Pendorf of the registrar's office made a partial analysis of the academic records of the graduating class of the College of Literature, Science, and the Arts of June 1937.[1] The class of 1937 received degrees two years after the first class graduating under the newer procedures of the Faculty of the College, called concentration.

The plan of concentration provided briefly: (1) no student may be classified as a junior and admitted to candidacy for a degree in a given field unless he has a minimum of 60 semester hours' credit with a C average thereon; (2) any student who has 60 hours without the C average may remain in residence, on special approval, one semester in order to meet the required average; and (3) after this semester of grace he must withdraw or be admitted to concentration. Those admitted to concentration must do an additional 60 hours with C average after admission even though they had more than 60 hours when admitted.

From time to time faculty members, administrative officers, and others have wondered what specific changes were introduced or brought about by the concentration plan. Some have said no difference resulted—others have seemingly regarded the newer procedure as a revolutionary step. It seems appropriate that the registrar's office attempt to throw some light on this question.

During the session of 1939-1940 Robert Duval, of the registrar's office, undertook the task of coding the records of the graduates of June 1929 which would in so far as possible be comparable to the Pendorf analysis of the class of 1937. Mr. Duval's contribution in

[1] William M. Pendorf, "A Partial Analysis of the Academic Records of the June, 1937, Graduates of the College of Literature, Science, and the Arts," an unpublished thesis submitted in partial fulfillment of the requirement of the degree, Master of Arts, filed in the University library.

this connection is valuable, for without his services the present report would not be available. The class of 1929 was chosen because it was the second class graduating before all freshmen were admitted on the new plan.

We thus have a span of eight years between the graduates of 1929 and 1937, four years being occupied by the first class entering and graduating under concentration, 1935, with two years being allowed before and after the admission or graduation of this class.

The data were gathered with the use of the same questionnaire or code for 1929 as was used with the graduates of 1937. Obviously there was no 60-60 division for the graduates of 1929 as there was with the 1937 group. When the term "concentration" is used with reference to the class of 1929, it refers to that point in the career of the 1929 graduates when they had earned 60 hours and 60 points, or if they had passed more than 60 hours must have earned a C average on all work passed before their records could be considered ready for concentration. The pre-concentration program then refers to that period during the career of a student when he has not reached 60-60; the concentration period, or degree program, refers to that time in his career after which he has reached 60-60 or its equivalent.

The official records on file in the registrar's office were used as the primary source of information in this survey. Procedures in record keeping have changed between 1929 and 1937. It was therefore impossible to make direct comparisons between all items which were shown on the 1937 record as some of them were not entered on the 1929 record.

It is the purpose of this study to present comparisons between the records of the graduating class of the College of Literature, Science, and the Arts in June 1929, and June 1937 wherever these comparisons seem possible and profitable. Obviously a complete comparison on each possible point is beyond the scope of this investigation. The following, however, contains a partial analysis or comparison on selected points dealing with the degrees awarded, institutions previously attended before entering the College of Literature, Science, and the Arts, grade-point averages, fields of concentration, and academic discipline.

As is the case with most investigations made with the aid of IBM tabulating cards, many additional cross-references of data are possible which were not brought out or mentioned in this study. If interest should be expressed in certain portions of this material not

made available in this report, it is entirely possible that the material could be made accessible.

II. THE DATA

Degrees Awarded. In 1929, 791 degrees were awarded as compared with 829 in 1937. Eighty-nine per cent of the degrees in 1929 and 88 per cent in 1937 were Bachelor of Arts. The degrees Bachelor of Arts in Library Science, Bachelor of Science, Bachelor of Science in Medicine, and Bachelor of Science in Chemistry were granted both years to a much smaller percentage of students. In 1929, 13 per cent of the graduates received their degrees With Distinction as compared with 8 per cent in 1937.

In addition to the degrees granted, 150 students graduating in 1929 received a teacher's certificate, as compared with 105 in 1937. A few each year received certificates in social work, geology, or other specialized fields.

The percentage of men and women receiving degrees in 1929 and 1937 varies slightly but not significantly, being 60 per cent men and 40 per cent women in 1929 and 57 per cent men and 43 per cent women in 1937.

Institutions Previously Attended. There seems to be no significant difference in the two graduating classes when analysis is made of the institutions previously attended before enroling in the College of Literature, Science, and the Arts. Fifty-five per cent of the graduates in both years were admitted from high schools, 10 per cent in 1929 and 12 per cent in 1937 were admitted from junior colleges, 30 per cent in 1929 and 27 per cent in 1937 from senior colleges, with a few each year being admitted from other units.

There appears to be no significant difference between the amount of credit allowed transfers in 1929 and the amount of credit allowed in 1937. In 1929 the median number of hours allowed transfer students was 54.3, and in 1937 it was 57.0. The slight difference that may exist is probably chargeable more to change in admission policies than to changes induced by the program called concentration.

Grade-Point Averages. Grade-point averages earned during the degree program period, the total period of residence in the college, the first semester of pre-concentration, the first semester of concentration, and the total concentration average show in each case that averages earned by the class of 1937 are consistently higher than those earned by the class of 1929. The difference is sufficiently large

to be statistically significant. There is no evidence, however, to support a statement that a causal relationship exists between the establishment of a plan of concentration and the higher grade-point averages.

It should also be noted that two students entering from junior college, four entering from senior college, one from another unit of the University of Michigan campus, and fifteen entering from high school in the class of 1929 never reached the required C average after admission until the semester in which they were finally graduated. These 22 students in the class of '29, who did not attain a C average until the semester in which they received a degree, would have had approximately 60 additional hours of credit to earn and maintain a C average thereon if they had been governed by the same regulations as operated in 1937 . . . provided the authorities had allowed them to remain in residence that long. This is perhaps one of the most significant differences in the records of the two graduating classes.

Fields of Concentration. One cannot be too sure that the fields considered the major for the graduates of 1929 are entirely accurate since the records of this class did not contain an entry naming the subject considered the student's major. In many records it was easy to tell the subject in which the student was majoring, and in other cases the work was so largely scattered that it was virtually impossible to be sure that the field selected would be the one in which the student would admit doing his major work. The most intelligent possible effort was made to indicate the field in which the major work seemingly was done in 1929. This difficulty did not pertain to the class of 1937 since their records contain the specific notation regarding the field of concentration selected and when it was selected. The data of Table I indicate the fields of concentration at the time of graduation of the classes of 1929 and 1937.

The difficulty in determining the exact majors of the class of 1929 may, of course, affect the validity of the remaining portions of this study since the fields selected as the major fields, if erroneous, would affect all later data in which that field is considered as the major field of interest.

An analysis of the following factors: (1) departmental hours in the field of concentration completed by the graduates of 1929 and 1937 before admission to concentration; (2) departmental hours in the field of concentration completed by the graduates of 1929 and 1937 after admission to concentration; (3) semester hours earned

by the graduates of 1929 and 1937 during the pre-concentration program in the group including the field of concentration; and (4) semester hours earned by the graduates of 1929 and 1937 during the degree program in the group including the field of concentration—

TABLE I

FIELDS OF CONCENTRATION AT TIME OF GRADUATION OF CLASS OF 1929 AND 1937

FIELD	1929	1937
1. English	123	56
2. History	87	97
3. Economics	61	79
4. Group III	51	1
5. Letters & Law	44	44
6. Mathematics	37	15
7. Science & Mathematics	35	34
8. Group I	34	1
9. French	31	30
10. Spanish	19	11
11. Letters & Bus. Ad.	18	22
12. German	17	18
13. Latin	15	8
14. Political Science	14	46
15. Journalism	14	33
16. Speech	13	31
17. Geography	12	16
18. Letters & Medicine	12	27
19. Chemistry	11	27
20. Sociology	8	88
21. Zoology	7	26
22. Landscape Design	7	1
23. Botany	6	3
24. Social Studies	5	6
25. Psychology	4	13
26. Romance Languages	4	2
27. Geology	3	7
28. Letters & Bus. Ad. & Law	3	1
29. Music	3	1
30. Fine Arts	1	10
31. Philosophy	1	1
32. Classical Languages	1	0
33. Greek	1	1
34. Physics	0	7
35. Anthropology	5	5
36. Oriental Civilization	0	4
37. Astronomy	0	1

clearly indicates that more specialization occurred in 1937, in the last two years of college, than occurred in 1929. Both classes earned more credit in the field of specialization during the last two years than during the first two years, but the difference is much more pronounced for the class of 1937 than for the class of 1929.

Sixteen of the class of 1929 and 14 of the class of 1937 completed the English requirement after admission to concentration. Twenty-eight of the class of 1929 and 70 of the class of 1937 completed their Group I—the humanities—requirement after admission to concentration. Two hundred and one of the class of 1929 and 208 of the class of 1937 completed their Group II—science and mathematics—requirement after admission to concentration. One hundred seventy-three of the class of 1929 and 175 of the class of 1937 completed their Group III—social science—requirements after admission to concentration. If there is an advantage in having the group requirements completed before admission to concentration, that advantage belongs to the class of 1929. An analysis of (1) the grade-point averages earned by the graduates of 1929 and 1937 in the field of concentration during the pre-concentration program and (2) grade-point averages of the graduates of 1929 and 1937 earned in the field of concentration during the degree program again show that the class of 1929 did not earn as high average grades as did the class of 1937.

Academic Discipline. Since the class of 1937 has been shown to have consistently higher averages than those earned by the class of 1929, one is not surprised to note that the class of 1929 had a smaller percentage of students never on discipline and a larger percentage of students on discipline one or more semesters. Both classes, however, graduated two individuals who were on academic discipline nine semesters during their collegiate careers. Another bit of evidence to the general effect that the poorer students in both classes were equally poor is seen from the fact that an analysis of the averages earned by the graduates of the two classes according to semesters on discipline does not show any superiority of one class over the other.

Failure to Concentrate. When the student making normal progress toward the degree has been in residence four semesters, if admitted from high school, he would have credit for 60 hours and a C average thereon. This would enable him to be admitted to concentration. There are, of course, a few students each year who fail to meet the required standards and are therefore not admitted to concentration. The data regarding causes of ineligibility to concentrate are inconclusive since the records of 1929 were not kept in such a way as to make comparisons with the class of 1937 possible in all cases. It is apparent from the data available, however, that 82 of the class of 1929 would not have been eligible for concentration at the completion of 60 hours, whereas only 48 of the class of 1937 were ineligible to

concentrate at the completion of 60 hours. This again would tend to show the increased scholastic efficiency of the class of 1937 over the class of 1929.

III. SUMMARY

Three salient points have appeared in this comparative report between the graduates of the class of 1929 and the class of 1937.

1. The class of 1937 maintained consistently higher grade-point averages than did the class of 1929. The class of 1929 as a group spent more semesters on discipline than did the class of 1937. The class of 1937, however, graduated two students who had been on discipline nine semesters.

2. Twenty-two of the class of 1929 did not reach a C average on work elected in the College until the actual semester in which they received their degrees. Under the rules operating for the graduates of 1937, these 22 individuals would have had to do a minimum of 60 additional hours at this time, provided they had been allowed to remain in residence that long.

3. A definite tendency was noted for the class of 1929 to take a higher number of hours in the field of concentration before formal admission to concentration than was earned by the class of 1937 prior to concentrating in a field. In other words, specialization seemed to begin earlier with the class of 1929 than with the class of 1937. This is further corroborated by evidence to show that the class of 1929 earned fewer hours in their field of concentration after the 60-60 period than did the class of 1937.

This is not a complete report or comparison between each possible item of the graduates of 1929 and the graduates of 1937. It has illustrated the possibility of comparisons which would tend to evaluate the newer procedure adopted by the college. Additional evidence should, of course, be made available before any judgments approaching finality are reached.

DEVELOPMENT AND APPRAISAL OF CUMULATIVE RECORDS AT THE STATE TEACHERS COLLEGE, TOWSON, MARYLAND

REBECCA C. TANSIL

ALTHOUGH records of one kind or another have existed since the admission of the first student to college, the number and type of student records in colleges have undergone many changes in the past two decades. These changes have been necessary as a part of the program to individualize instruction. In this program there is urgent need to have more information about a student than a mere accounting of the courses and grades. The cumulative record is a partial answer to this need.

There was little concerted effort on the part of higher institutions of learning to work together for the development and improvement of cumulative records until steps were taken by the American Council on Education about 1927. Most educators interested in personnel work are familiar with the survey of personnel procedures in fourteen institutions conducted by L. B. Hopkins. This was one of the first surveys of personnel activities and it had a real part in motivating the personnel movement. In his report Hopkins particularly pointed out the lack of co-ordination in personnel services. Although in some colleges he found considerable information available for students this information was often in scattered offices, there were few central records containing a synopsis of this information concerning students, and the information on hand was not being used.

It was soon after this survey by Hopkins that the cumulative personnel record folder of the American Council on Education was deloped by a sub-committee on personnel records. This cumulative record has had a great influence on the revision of records in many institutions and has been adopted by large numbers of high schools and colleges. The greatest contribution the committee made, however, was not that of presenting a particular record form, but of developing a consciousness in institutions of the need of some kind of cumulative record.

Any institution initiating a personnel program makes a great mistake if it tries to take over in its entirety the program of another institution. Although valuable suggestions can be received by study-

ing phases of programs in various colleges, the final program must be built upon the aims and objectives of the institution. The same holds true in the development of a cumulative record, for the record should be planned with the objectives of the institution in mind. A standard pattern may be used but the record, in the last analysis, must meet the particular needs of the college where the record is to be used. This article will describe how an institution developed a cumulative record to meet its particular needs and will then give, in part, the findings of an investigation to determine to what degree the record has met the needs for which it was initiated.[1]

In 1931 the State Teachers College at Towson, then the State Normal School, changed from a two-year to a three-year institution and in 1934 the program was again lengthened and a standard four-year curriculum initiated. Just prior to the undertaking of the three-year curriculum a comprehensive five-year survey of the student body was made.[2] The purpose of this survey was to give a basis for the new curriculum especially with reference to the students' needs. This survey pointed out the urgent need for more personal guidance for students and urged that emphasis be placed upon the development of personal traits so necessary for the success of the teacher. A faculty committee was appointed to plan and initiate a personnel program and the registrar's office was selected as the co-ordinating agency for personnel work. There was no attempt to centralize the control of certain agencies dealing with student personnel problems, but the aim was to use one office as a clearing house for student information, thereby promoting the efficiency of the various departments. The first step in co-ordinating the program was to build up a satisfactory central record which could be used as a summary for all student information. An informal survey was made of the student records kept in various offices of the college. Some of these were transferred to the registrar's office and reports from other scattered records were requested sent to the office at certain intervals. A skeleton record was set up providing space for information believed desirable for meeting the objectives of the college. Records of many institutions were

[1] Tansil, Rebecca C., *The Contributions of Cumulative Personnel Records to a Teacher Education Program.* Bureau of Publications, Teachers College, Columbia University. Contributions to Education #764.

[2] Snyder, Agnes and Carley, Gertrude, "A Five-Year Study of the Student Body at the Maryland State Normal School at Towson, 1931." (Typed manuscript on file at the College, Towson, Maryland.)

studied and valuable leads were obtained from the five-year study of the student body mentioned earlier. The record was designed on the plan of the American Council on Education record, with modifications to meet the local situation, and space provided for student teaching experiences. On this skeleton record was transcribed the information available for a recent graduate. This showed the inadequacy of the information so plans were made for the gathering of additional data. The proposed record was submitted to three specialists in teacher-education for criticism and suggestions as to content and make-up. Vocational counselors of a group of near-by high schools assisted in the formulation of a personality traits scale to be used on the record. Since the guidance program should extend into the field it was hoped that the cumulative record would be valuable in placement work. Therefore, the information that seemed usable for placement purposes was so arranged on the record that this part could be reproduced and sent to employing agencies.

Many administrators who contemplate the adoption of cumulative records hesitate to do so because of the expense, and because they question whether the use and value of the records will justify the expense and labor involved. Sometimes the enthusiasm of a record-builder will carry him to great heights in developing a beautifully planned and all-inclusive record. However, its very inclusiveness may prohibit the use of the record and thus defeat the purposes for which the record was established.

After the cumulative record described above had been in use for six years it was decided to take stock of the value and limitations of the record, and to determine to what extent the record was meeting the needs for which it was established. Since a personnel program should never be static but always subject to change to meet present conditions, so a record should be improved upon from year to year and additions made or unused data removed. The appraisal of the record was based on (1) the use of the records; (2) growth of the records; (3) development of students through the use of the records; (4) attitude of faculty and students toward the records; (5) the record as it portrays the individual and (6) the record as a basis for predicting teaching success.

This article will not discuss the record as a basis for predicting teaching success as this is of main interest to institutions devoted to the training of teachers. It is hoped that the other methods for ap-

praising the record will be of general interest to various types of colleges.

USE OF RECORDS BY FACULTY MEMBERS

Since the record was developed for the purposes of assisting in the program of student development and in the individualization of instruction it was hoped that the record would be used extensively

TABLE I

CUMULATIVE RECORDS USED BY FACULTY MEMBERS DURING SPRING OF 1937* AND FALL OF 1937

CLASSIFICATION OF STUDENTS	NUMBER OF STUDENTS REGISTERED		NUMBER OF INDIVIDUAL EXAMINATIONS OF RECORDS		NUMBER OF TIMES INDIVIDUAL RECORDS WERE USED		RECORDS NOT EXAMINED		PER CENT OF RECORDS USED	
	Spring 36–37	Fall 37–38	Spring 36–37	Fall 37–38	Spring 36–37	Fall 37–38	Spring 36–37	Fall 37–38	Spring 36–37	Fall 37–38
Freshmen	190	159	400	456	1–4	1–5	0	0	100%	100%
Sophomores	100	151	256	422	1–4	1–6	0	0	100	100
Juniors	97	75	127	168	0–2	0–3	40	1	58.7	98.6
Seniors	15	45	30	72	2	0–4	0	3	100	93.3
Specials	18	22	11	11	0–2	0–1	8	11	55.5	50
All Classes	420	452	824	1129†	0–4	0–6	48	15	88.5	96.7

* The check on the records used was not begun until March 1, 1937, which was one month after the beginning of the spring semester.

† Does not include the 112 records examined twice by three different faculty members working on an experiment with records. The inclusion of these records would materially increase the number of examinations but these examinations were requested instead of voluntary. It is reasonable to believe, however, that many of these records would have been used voluntarily had they not been included in the experimental group.

by the faculty. Faculty members not only are classroom instructors but assist in carrying on the decentralized personnel program by acting as advisers. Although the cumulative record was presented to the faculty soon after its inauguration, the use of the record by the faculty has always been on a voluntary basis.

That the faculty members were consulting records more frequently each year since their inauguration was observed by the staff of the registrar's office where the records are maintained. However, no accurate accounting of faculty use was kept until the year 1936-37 when a check was made for a certain period of time and again in 1937-38. A blank was inserted in the record of each student and faculty members were requested to fill out the blank indicating that a certain record had been used and checking the purposes for which the record was

used. Table I shows the number of records used by faculty members over these two periods of time. The total number of records used over these two periods is probably greater than the table indicates. Although the majority of faculty members complied with the request to fill out the blanks, there were occasions when records were used by some faculty members and no blanks were filled out. The checks on the use of the records not only showed the number of individual records used but furnished information on the per cent of faculty members using the records during these periods of time. Table II will show the number of faculty using records.

TABLE II

FACULTY MEMBERS USING RECORDS DURING SPRING OF 1937 AND FALL OF 1937

CLASSIFICATION OF FACULTY	NUMBER OF FACULTY ON STAFF		NUMBER OF FACULTY USING RECORDS		NUMBER OF FACULTY NOT USING RECORDS		PER CENT OF FACULTY USING RECORDS	
	Spring 36–37	Fall 37–38	Spring 36–37	Fall 37–38	Spring 36–37	Fall 37–38	Spring 36–37	Fall 37–38
Classroom Instructors and Advisers	30	32	20	23	10	9*	66.6	71.8
Training Teachers (Campus School and Affiliated Centers)	25	30	15	30	10	0	60	100
All Faculty	55	62	35	53	20	9	63.6	85.5

* Of this number five used the records experimentally and this additional work may have limited the time for using the records voluntarily.

If the value of the cumulative records is partially reflected by their use, then the voluntary use of the records by faculty members would indicate that they have been found valuable. During the first period 63.6 per cent of the faculty used the records, and 85.5 per cent used the records during the second period. During both periods every freshman and sophomore record was examined one or more times and the per cent of records used of the total student body was 88.5 for the first period and 96.7 for the second period.

ANALYSIS OF THE USES OF THE RECORDS

In filling out the blanks concerning the use of records faculty members were asked to state in what capacity they were using the records (advisers, classroom instructors, training teachers, etc.). Also they

were to indicate on the coded blank the information they were seeking from the record and check the purpose for seeking this information. A study of the blanks show that the faculty members use the records in the various capacities in which they serve and that the type of information sought ranges from an examination of a single item on a record to an intensive study of the complete record. The information obtained from the record is used for various purposes but the most frequent uses are: (1) for improvement of classroom instruction; (2) for the assignment of students to training centers and (3) for the purpose of understanding the problems of the individual student in all his college activities and in his student teaching experience.

USE OF RECORDS BY ADMINISTRATIVE OFFICES

Since the records are kept in an administrative office it was difficult to keep an accurate check on the frequency of the uses of the records. Entries are constantly being added to the records and an entry that calls for immediate attention is taken care of either by a student conference with the registrar, or by a communication to the president, a classroom instructor, or adviser. The records are used by administrative officers for various purposes but especially significant is the use of the record for recommendations to the scholarship committee, as a basis for correspondence and interviews with parents or students, and as a basis for conferences with students.

GROWTH OF RECORDS

It is believed that faculty members will contribute to the records in so far as they have found them valuable. The cumulative record was designed with the hope of bringing together a greater amount of qualitative material about students. In a co-ordinated program the faculty plays a most important role in making contributions to the records. High school principals, too, furnish valuable information on the personality rating that is asked for each entering student. The accumulation of qualitative material has been a slow process. An examination of the records of students entering in 1931 and of the records of students entering in 1936, five years later, shows conclusively that the number of contributions from high school principals and faculty members has increased considerably over this period of time. In order to determine the definite growth a number of records

were examined for an accurate check on contributions by faculty members, by administrative officers, and by high school principals. A random sampling of 180 records was taken from three groups of students entering the college and remaining for either the three- or four-year courses: 60 from the group entering in 1932; 60 from the group entering in 1934; and 60 from the group entering in 1936. The records were withdrawn alphabetically. Although the examination of these records shows that the number of contributions has not increased rapidly, there does seem to be a gradual growth. Of special interest and importance is the increase of these contributions to the records during the freshman year, since these contributions supplement the quantitative measures on the record and aid in determining whether a student should continue in the college.

In a study of the growth of qualitative contributions to the record a question arises concerning the quality of these contributions: Have the contributions improved since the beginning of the records? In other words, have faculty members improved in their ability to evaluate students as evidenced by their comments on the records? To answer this question a sampling of records was judged for quality of contributions. Three faculty members were asked to judge these contributions. The faculty members selected were as follows: one from the psychology department who had made wide use of the records since their initiation, one from the department of educational measurements, who had also made wide use of the records; and one from the science department, who was a new member of the staff and had used the records over a period of only a few months. The records were numbered and the names of students covered so the faculty members could not be biased by their own personal opinions about students. The faculty members were asked to judge the contributions on the basis of clarity, constructiveness, and concreteness. The judges agreed rather closely in their ranking of the records. The agreement between Judges A and B shows a correlation of .73, between A and C of .81, and between B and C of .72. The agreement of these three rates would seem to justify the reliability of the degree of value placed upon these contributions to these records. This evaluation of the contributions to the records shows that the contributions for students entering in 1936 are considered superior to the material on the records for students entering in 1932 and in 1934. The difference in the ranking of the records of 1936 with the combined ranking

for the 1932 and 1934 records is not only completely reliable but is twice as large as it need be to guarantee reliability.

Although the findings here indicate that contributions to records are improving, an examination of the individual contributions shows that many of them are still poor and that faculty members should make an effort to improve the material submitted for records.

APPRAISAL AND USE OF INDIVIDUAL ITEMS ON THE RECORD

Although the record has been reprinted three times since it was inaugurated there have been only a few minor changes in its make-up, and the items, except in two or three cases, remain the same as when it was first printed. It is important to know which items are considered valuable by staff and which are being used. If certain items are not valuable and are not used they should be removed from the record.

Since the faculty members are the ones who use the records it was felt that they should be given an opportunity to appraise the record and make suggestions for its improvement. The faculty members were first asked to study the 59 individual items on the record and rate these items as to the value they felt each item had. These items were to be rated on a five point scale. After rating the items for value the faculty members were asked to rate the items for the use they made of these items. A study of the faculty rating of these items shows the following results:

Value of Items on the Record

Faculty members, as a group, consider all items on the cumulative record valuable and no item is rated below 3.5, which on a five-point scale is interpreted as "valuable." Of the 59 items on the record, 29 are rated 4.5 or above by the entire group of faculty which means that these items are considered "extremely valuable." When the ratings of the directors of student teaching and the training teachers are considered separately it is shown that these faculty members place more value on family background and on personality ratings and qualitative material about students than do other members of the staff.

Use of Items on the Record

There is less agreement among faculty members in the use of the items than in the value to these same items. The training teachers and directors of student teaching not only rate the value of items higher than the other members of the faculty but they use more items on the record. This higher rating can be accounted for partially by the fact that a training teacher has only two students for a nine-weeks period, and can thus scrutinize the

records more carefully than the average faculty member who has from 75 to 125 persons in classes during the same period of time. Also the training teachers and directors of teaching no doubt feel the need for learning about students because students during this period are faced with many problems. The records are more accessible to faculty members in the college than to the training teachers so the members of the former group consult the records more often although they may not go over all items during a single visit. The rating of the uses of items by the faculty group shows that only one item received a rating below "3" meaning that the item is only occasionally used.

The faculty ratings of the value and use of the individual items on the cumulative record indicate that there is no information on the present record that the faculty members in general would discard.

EXAMPLES SHOWING HOW PARTICULAR RECORDS HAVE ASSISTED FACULTY MEMBERS IN UNDERSTANDING STUDENT NEEDS

Faculty members were asked to give concrete examples of how information secured from the examination of a particular record had assisted them in caring for student needs, or for securing a better understanding of the student. The faculty members were to state in what capacity the record was used and were asked to give one example each capacity in which they had served when examining records. Some typical examples given by faculty members are quoted below:

As Classroom Instructor

Record of student doing very poor work examined. Student was found to be of average ability or above, but he was working every day in a store. Record and work were discussed with student with the result that most of the store work was discontinued and scholastic record improved, as well as general appearance and manner of student.

As Adviser of Student

Learning of the financial difficulties of a certain student through his record, I was better able to understand his attitude toward things in general. Following up the information in the records I found out that the student had been forced to give up, because of financial difficulties, a profession which he had been anxious to follow.

As Honorary Adviser for Class

Records used to help determine whether students carrying heavy load of committee work could do so without undue loss scholastically or physically.

As Faculty Member with Special Interest in Student

In supervision, a superior student whose record I knew was saved from failure in student teaching.

As College Physician

Acquaintance with the social conditions and financial difficulties helps to solve difficult problems; of great importance is the time spent in employment, both NYA hours and outside employment.

As Librarian

Record used to secure information about standing of student and position of responsibility held before talking with her about behavior in the library.

As Training Teacher

Student emotionally upset, but after reading about her home background and knowing financial difficulties, I was better able to see her problems and help her.

As Director of Student Teaching

Information on record assists in stimulating students to do better work or to analyze apparent attitudes; also to enrich social experience.

The majority of the examples indicate that faculty members have used the records in an effort to secure a better understanding of individual student needs and for the improvement of instruction.

FACULTY SUGGESTIONS ABOUT ADDITIONAL MATERIAL FOR RECORDS

Faculty members were requested to make suggestions about additional facts they desired on the records. The suggestions received did not suggest new material but an enlargement of present information. Only a few faculty members made suggestions about additional material and most of these suggestions had to do with material on personality development, especially the inclusion of some objective measurement of personality, and material on the special interests of students.

DANGERS AND LIMITATIONS OF THE USE OF RECORDS

There are two opinions among educators regarding the use of personnel records. One group believes that records should be used extensively before attempting to advise with students, and one group believes that records should be used only after an instructor has

formed a personal judgment of the student. It would be expected that these two opposing views would be present in any college faculty. Faculty members were given an opportunity, therefore, to express their criticisms concerning the use of records and to state the limitations of the records. A few of the statements are given below:

"Personally I feel that students should know more of what is in their records."

"I think the danger exists that students will develop a self-conscious and resentful attitude toward faculty members. I have felt that real harm has been done by quoting directly from these records."

"Records do not record personality and they are not ends in themselves. They should be used only as data which aid in the understanding and guidance of the individual personality."

"Comments and reports of interviews cannot always be given in full content and so are sometimes misleading and productive of prejudices on the part of other persons who have access to the records."

An analysis of faculty statements regarding the dangers and limitations of the use of the records shows that faculty members as a group recognize the limitations of records. The part of the record that must be used "cautiously" according to the faculty is the part dealing with personality ratings and personal comments by faculty members. The consensus of faculty opinion regarding the value of these items is that members regard these personal items as "valuable" and they "usually" use this part of the record when examining student records. Also many faculty members feel that more information on personality should be included on records.

USE OF THE RECORD IN THE PLACEMENT OF GRADUATES

A survey of the uses of the records would not be complete, and the question of whether the record has met one of the needs for which it was inaugurated could not be answered, unless some measure of its usefulness in the field were attempted. Since 96 per cent of the records of the graduates during the four-year period when cumulative records were available have been used for placement in Baltimore City and seven counties of the state, it seemed logical to limit the inquiries concerning the records to these eight school systems. Three officials of the Department of Education, Baltimore City, and seven county superintendents were asked to answer a questionnaire concerning the use of records and including a rating scale for certain items on the record.

Of the ten questionnaires sent to the eight school systems, nine were returned. One county superintendent failed to reply. In this county only eleven graduates have been placed during the past four years, so the number of records handled by the administrators in the seven school systems total 420. The value and use of the records in the field are given below:

1. Eight of the nine administrators who have used large numbers of records in the placement of graduates consider the part of the cumulative record released to them an improvement over material previously sent. One administrator did not consider the record an improvement.

2. Not only are the records used for initial placement of graduates but eight of the nine administrators consult the record after placement to assist the young teacher in making adjustments.

3. Eight of the nine administrators state that supervisors use the records for improvement of supervision, as a basis for understanding the young teacher, and for the purpose of encouraging the teacher to make the most of her strong points and to work upon her weaknesses.

4. Administrators do not agree on the value and use of the various items on the record released for placement. Fifteen of the twenty-eight items are considered of "doubtful value," but no item is rated below this scale value, which means that the administrators, as a group, do not consider any item "of no value and never used." The items receiving the highest ratings are the several items dealing with student teaching data, scholarship in the college, general ability as disclosed by test results, date of graduation from the Teachers College and membership in extra-curricular activities.

DEVELOPMENT OF STUDENTS THROUGH THE USE OF RECORDS

In a college where faculty members have full teaching programs and no reduction in load is made for advisory duties, personnel work, to be effective, must be supplemented by the aid of administrative officers who have records at hand and who are available for the work. Since the State Teachers College at Towson is a small institution, the president's office is naturally the focal point of all student personnel work. It is here that serious student problems are discussed, that parents come for interviews about student successes and failures, and that the scholarship committee meets at intervals to "settle" certain

scholastic and personal problems of students and to formulate policies regarding the future disposition of similar cases.

The cumulative record is an important factor in scholarship committee discussions. Student interviews usually follow scholarship committee action and in this interview the cumulative record plays an important part since the interpretation of the material is used to assist the student in understanding his difficulties and it is used as a basis for making suggestions for improvement.

Although students are requested to come for interviews at certain intervals when the need arises, and especially at the close of semesters when scholarship committee action makes these interviews necessary, the administration has attempted to place interviews or conferences on a voluntary basis.

Students first become acquainted with the cumulative records and their purposes at Freshman Mothers' Week-end which is held during the early part of the first semester of the freshman year. Cumulative records are available at this time for interviews with freshmen and their mothers. Again just before the end of the first semester a meeting is held with the members of the freshman class at which time the registrar usually discusses the grading system of the college. Through the use of slides, certain material dealing with the freshman class or comparable material on the year preceding is shown, and the importance of social development as well as academic achievement is stressed. This group conference is held especially to "condition" the students for the marks that will be given them at the end of the semester, and is an attempt to break down the theory that grades are the all-important phase in teacher-education. Personality traits are discussed, and the importance of personality development is stressed. Student records are described and the freshmen are told that they will have an opportunity to discuss their progress as evidenced by their records soon after the beginning of the second semester, through conferences with the registrar.

The cumulative record is used as a basis for the discussion at these student conferences. The student is free to ask questions about his progress in college and to discuss any difficulties that his schedule may present. Interpretations of the cumulative record are made so that a student has an opportunity to appraise himself in the light of his ability, scholarship achievement, and development of social traits.

Although voluntary conferences with records have been held since

1932-33, the second year that the record was used, detailed records of these interviews were not kept until 1936-37. A check on the uses of records with students discloses the following:

1. A check on the number of students who *voluntarily* seek conferences about records, kept over three different semesters, shows that 27 per cent of the students came during the first two periods and 50 per cent came during the third period. This does not include the conferences with records held at the close of semesters with all probation students or any requested conferences.

2. The majority of the students return for follow-up conferences after the initial ones. Fifty-seven per cent of the conferences held during the third period were follow-up conferences. Of the sophomores who came for voluntary conferences during their freshman year, all except thirteen returned for a second conference; of the juniors, all except six returned; of the seniors, all except one.

3. A record kept of freshman conferences over three semesters shows that 41 per cent came in the first period, 32 per cent in the second, and 71 per cent in the third period. During this last period a new plan whereby students could sign for conferences instead of waiting in line facilitated the interviews held during this last period and no doubt was a contributing factor in the increase of student interest and attendance.

4. The use of records with students does not increase the scholastic averages of students, according to a comparison of averages of students who came for interviews about records and those who did not come. Although there was a difference in the average losses sustained by the two groups—in favor of the students who came for interviews—the difference was not large enough to guarantee that it was reliable and not due to sampling error.

Averages in certain subjects were compared for students whose records were used and for those whose records were not used by faculty members teaching these subjects, and there was no significant difference in the scholastic averages of the two groups.

In order to get the reactions of students to the conferences with records, questionnaires were sent to students who had had conferences during the preceding year. The questionnaire included questions regarding (1) reasons for seeking conferences, both initial and follow-up; (2) suggestions for improvement as made in the conferences, and progress of students in attempting to carry out these

suggestions; (3) the topics for discussions in the conferences that the students felt were most important; and (4) criticisms and suggestions for improvement of conferences and the wishes of the students regarding the continuance of conferences. The findings given below will indicate the attitude of the students towards the records:

1. Students seek the initial conferences with records for various reasons, but especially because of a desire to discover weak points and to receive suggestions for improvement; to obtain information about personality traits and the development of social traits; and for information about academic work and student teaching record.

2. Forty-four per cent of the students answering the question about follow-up conferences stated that they sought these conferences to check on improvement of records. The remainder of the students came for follow-up conferences for the same reasons as stated in 1 above.

3. Students consider the topics of discussions with records in the following order of importance:

(1) A self-appraisal by discussion of record as a whole.
(2) Personality ratings and their meanings.
(3) Social traits and habits.
(4) Academic averages by semester.
(5) Value of extra-curricular activities.
(6) High school record and entrance tests.

4. Sixty-one of the seventy-nine students answering the questionnaire about records stated that definite suggestions had been given them in the conferences. Of these sixty-one, fifty-five said they had tried to carry out these suggestions. The suggestions made, according to students, covered various points, but the highest per cent (46 per cent) of the suggestions had to do with the development of certain traits. Other suggestions dealt with academic work, participation in extra-curricular affairs, and miscellaneous matters.

5. Seventy-eight of the seventy-nine students answering the questionnaire stated that the conferences should be continued. Suggestions about the conferences include recommendations about the administration, time, length, and frequency; while others deal with the content of the conferences. There were criticisms which indicate that some of the students have an unfavorable attitude toward the records, but these are few, and the students as a whole seem to have a healthy attitude toward suggestions given to them in conferences.

THE RECORD AS IT PORTRAYS THE INDIVIDUAL

The cumulative record, designed for the accumulation and presentation of data regarding students, should present a fairly inclusive developmental picture of the individual student. The limitation of records are accepted and it is realized that a record can never give a *complete* picture of a student, for there are certain personality traits and intangibles that cannot be relegated to records. However, the record should attempt to give as complete a picture of the individual as possible. In order to test the record on this point and to determine to what degree the record does portray the individual a plan was made for comparing the rankings of a selected group of students—the rankings being made with and without the use of records. The graduates of 1936 and 1937 were judged as potential teachers by three faculty members who made the judgments on the basis of cumulative records. These faculty members were added to the staff in 1937 and had no previous contact with these graduates in any way and the rankings were therefore entirely dependent upon the material found on the cumulative records. The composite ranking of judges, based on records, was compared with the average ranking of the same student by four faculty members who judged the student on the basis of acquaintance in classroom and other contacts during the student's four-year residence in the college. Three of these faculty members had met these students in classes at various times during their residence and the classes were small. In addition, the adviser of each group was included in this group of judges. The following findings are given:

1. There was a high agreement among the judges ranking the students on the basis of cumulative records, the highest correlation being .91 and the lowest .69.

2. The agreement of the four faculty members judging students on classroom contacts and acquaintance during their residence in the college was considerably lower than the agreement of judges ranking students on the basis of records. This agreement ranged from a correlation of .31 to .74.

3. The agreement of the composite rankings of the two groups of judges, those using records and those not using records, was .56 for the graduates of 1936 and .63 for the graduates of 1937. Although these correlations are not significantly high, it is believed that they are sufficiently high to state that the record, to a considerable extent, does portray the development of the individual student. In mak-

ing this statement it is assumed that the composite rating of a student by four faculty members on the basis of classroom contacts and acquaintance during the student's residence in the college represents a developmental picture of that student.

This investigation concerning cumulative records, a summary of which is given in this article, may be considered a case study in the use of cumulative records since it is concerned with the use of records in a particular college. It is not intended to leave with the readers the impression that there is an effective personnel program in operation at the State Teachers College at Towson or that the cumulative record used is a panacea for all personnel problems. The study described does not attempt to appraise the total program of guidance, or to compare the guidance work at this particular institution with that of other similar institutions. The personnel program is an informal one and cannot compare to the highly organized and effective programs in operation at many institutions. The study, however, does demonstrate how an institution can develop a record to meet its aims and objectives and how this same institution with a minimum of centralized direction can utilize the record after it is developed and initiated. Also, it is hoped that the study reveals that a better understanding of the needs of the individual students can be developed by co-ordinating information of students through a central cumulative record and by making this material available to members of the faculty and administrative staff working with students.

—Volume 16, Number 2

A REPORT ON THE EIGHT-YEAR STUDY

WILFORD M. AIKIN

THE first class in the eight-year study entered college in September, 1936, and was graduated last June. The fifth class began their college careers last September. Approximately 10,000 boys and girls from the thirty schools have now been admitted to 250 colleges. About 2,000 students have been carefully studied over a period of four years by a competent, impartial staff chosen from college faculties.

The students whose college careers were followed were in men's colleges, women's colleges, coeducational, privately endowed colleges, and state universities. For purposes of comparison, each student from the thirty schools participating in the study was matched with another student of the same age, sex, home and community background, and of the same scholastic aptitude. The "matchees" came from schools not in the study and followed the pattern of subjects prescribed by the college for admission. Results can now be reported. In the following statements, students from the thirty schools will be referred to as the "special" group; their "matchees," as the "comparison" group.

Grades: On the basis of grades, students from the thirty schools did fully as well as those with whom they were compared. Whatever difference there is in grades is in favor of the students in the Study, but the difference may not be statistically significant.

2. *Distribution of Time:* Only insignificant differences between the S and C groups were reported in respect to hours spent in study, class, commuting, and outside work for self-support.

Similarly there were no differences between the hours reported spent in study and in class by the sophomores. Twenty-two per cent of the S group and thirty per cent of the C group reported outside work for self-support.

3. *Organized Campus Activities:* In this area, substantial differences between the freshman S and C groups were found: the S group indicated not only more liking for organized activities, but also more frequent participation in a wider range of activities than the C group. The C group checked many more dislikes. The S's were more frequent participants in activities which presuppose an active interest in contemporary affairs (more often disliked by C group), in groups which necessitated considerable verbal facility, and in activities in which each participant was required to

assume some individual responsibility. The C group, on the other hand, more frequently participated in social clubs and in religious and service activities.

The sophomore S group was more active than the C group in dramatics, music, art, committees, and social clubs. There was no single area in which the C group showed significantly more activity.

4. *Problems:* In the autumn S students reported considerably fewer problems in the areas of study methods and organization of time. The two groups reported about the same amount of difficulty with such problems as persistent worry, making friends, etc.—symptoms which usually indicate poor personal-social integration. In the spring, both groups reported a decrease of troubles in each of the three areas and there were no marked differences between the groups.

The S group had relatively more trouble with emphasis on memorization, little free time, and many activities. The C group more often met difficulty in organizing material, lack of guidance, few activities, note-taking, study environment, and determining vocational aptitudes.

The most frequently listed problems for both groups were examinations, concentrating, budgeting time, heavy reading assignments, and lack of free time.

5. *Radio Programs:* The S group regularly reported more programs of symphony and classical music, more dramatics, and more forums and speeches. The C group listed more variety programs.

6. *Magazines and Newspapers:* There were no marked differences in the number of magazines read by the two groups. The freshman S group listed more "elite and smart," special interest, as photography, and miscellaneous magazines. The C group reported more popular weeklies, popular monthlies, and monthly reviews.

7. *Books:* S students read slightly more books apart from course requirements. Where ratings were available the books listed were classified by maturity level. The average maturity ratings for freshmen and sophomores, S and C groups, were regularly from 4.3 to 4.5 on a scale from 1 to 6 where 6 is high.

8. *Adequacies of High School Background:* In this area the freshman C group more often emphasized the following types of courses—(English literature, foreign language, science, and mathematics) and quality of instruction, while the S group was more concerned with *study tools* and *methods* of work. This latter group valued particularly: training in independent work and research methods, and learning how to study—especially note-taking, budgeting time, and organizing work. They also reported more frequently upon the similarity of high school and college, and more often listed English composition as an adequacy.

In the sophomore group the S group emphasized training in independent

work and independent thinking, the broad range of interests and appreciations, and the preparation for responsibility.

9. *Deficiencies of High School Background:* The freshman S group more frequently mentioned a lack of preparation in English composition, and the students considered themselves inadequately prepared for various characteristics of college, including examinations, impersonality of teaching, grading systems, type of study and classes, and the factual background demanded.

The C group more often felt poorly trained in independent work and in research methods, and that the high school-college transition was made more difficult because high school work was too easy. The C students also noted that they had not developed good study habits, and that the quality of high school teaching was poor.

10. *College Ideal:* The sophomores were asked to indicate what objectives they thought the ideal college education would help them to achieve. The two groups combined listed the following items, in order of frequency: acquire vocational training, receive a broad and deep general knowledge, develop the ability to live and co-operate with others, learn to think critically, find values and ideals in life, learn to adjust easily, make social contacts, and acquire the ability to understand contemporary affairs. Of these the S group more frequently mentioned developing discriminating cultural tastes and acquiring a broad and deep general knowledge while the C group more often noted the desire to learn to think critically and to develop a sense of values and philosophy of life.

11. *Success and Failure of College:* The students in each group mentioned most frequently that they were getting a start toward broad knowledge, were making some progress in vocational training and in learning to adjust to others more readily. The S group emphasized the factor of broader knowledge and social contacts. The C group more frequently felt they were learning to adjust to a new environment, to think effectively, and were obtaining leisure time skills.

In general the students were less expressive about the ways in which college had failed to help them. Failure to acquire vocational training was the most frequent complaint. Other frequent criticisms were that students didn't have enough free time and that they received no intellectual stimulation. A number of students stated that their high school work was considerably more stimulating than college—especially the first year in college.

12. *Satisfactions of College:* There were no appreciable differences between the satisfactions listed by the S and C groups. About one-fourth of each group expressed pleasure with having achieved some measure of intellectual growth, and with having made new friends. Almost ten per cent of each group also noted their satisfaction with the freedom from close supervision and with the feeling of adulthood which was provided by

being at college, with their courses, and with the discovery of their ability to get on with different types of people.

In contrast to the responses of these freshmen, it is striking to note that only one tenth of the sophomore S and C groups expressed satisfaction with factors of intellectual growth or accomplishment. Three times as many students mentioned social contacts and making friends as a satisfaction. Following friends, the next more frequently noted satisfaction named extra-curricular activities and contacts with the faculty. Athletics, fraternity activities, and strictly social activities were also mentioned more frequently than college courses.

13. *Disappointments of College:* Only about one-third of the students in the S and C groups made special comment concerning disappointments. Of those who did respond, more students in the S group noted the lack of contact with the faculty, and the conduct of students. More of the students in the C group were disappointed with courses, with their failure to acquire a broad view and understanding, and with their grades.

14. *Summary:* In terms of the criteria of college success which were outlined by the college representatives at the outset of the college follow-up and in terms of the suggestions made by several of the heads of the thirty schools, it is apparent that the students from the thirty schools have in general shown themselves to be well prepared for and successful in their college pursuits.

The members of the S group, when compared with a similar group from other schools, have not only achieved grades of at least equal caliber, but also participated more frequently in campus activities, showed a greater interest in contemporary affairs, participated as freely in social life, and had a broader range of interest in aesthetic experiences, both creative and appreciative. At the outset at least, they had an advantage over their fellow-students by reason of having less trouble with study skills and with organizing time. There seems to be no difference in the frequency of problems in the area of personal-social integration.

In reacting to their educational experiences the students in the S group were generally more discriminating in their comments—a product, apparently, of greater sensitivity and verbal facility. In commenting on their high school background they more often emphasized the value of their training in study skills, and in independent work and research; the comments of the C group were more often limited to specific courses. In regard to college experience the groups felt that although they were in many cases getting a start toward vocational training and toward a broad general knowledge, the work in college was not particularly stimulating—often much less so than high school.

The differences noted in this report would suggest that the students in the S group either have made an easier adaptation to their new environ-

ment, or have gone a step farther and actually thought through and are acting in terms of their own values. In either case, the data certainly indicates that students who are graduates of the special curriculum schools are not handicapped thereby in their college experiences.

Every school in the study testifies to the stimulation, growth, and vitality which they have experienced as the result of their participation. The colleges have found the students satisfactory. Our study fails to reveal a relationship between the pattern of subjects followed by the secondary school student and his success in college.

It seems to me that college registrars and all others in responsible administrative positions are challenged by the results of this study to consider the following questions:

1. What are adequate measures of success in college?
2. What is the basis upon which successful college achievement rests? Does it depend upon the study of certain subjects for a certain number of years in high school, or upon qualities of mind and character and habits of work?
3. Are there many different kinds of secondary school experiences by which students may develop the competencies necessary for college work?
4. If the answer to the above question is in the affirmative, what justification has the college for prescribing a certain pattern of subjects and credits?
5. The challenge which comes to the participating schools as the result of freedom from prescription is of inestimable benefit to them. Why should hundreds of other competent schools not have this same kind of experience?

The secondary schools of the United States are facing the greatest responsibilities to American society in their history. They cannot meet these responsibilities without the co-operation and help of the colleges. They must meet the needs of all Amercan youth. Of six students who enter the high school, only one goes on to college. The schools are attempting to meet the needs of that one, but they must serve equally well the other five. How are the colleges going to help them?

—*Volume 16, Number 2*

THE CATALOG AND THE CURRICULUM

DELMER GOODE

THIS paper rests on an underlying assumption that the function of the college catalog is to present and to interpret the curriculum. A sketch of the curricular situation in American higher education today will first be attempted, followed by some consideration of the relation of the curriculum to the catalog.

Common academic usage has outgrown the dictionary definition of the curriculum as a specified, fixed course of study, although the word is still used in this narrower sense. Time was when the colleges had a single course of study, pursued by all students alike, and instances still survive. The curriculum of most colleges today, however, can hardly be described as simple, but rather as multiple and diversified. The term curriculum now has wide acceptance as signifying all the experiences that the student has under the guidance of the college. This broad view is not as new as it sounds. Colleges always, in fact, while they have awarded degrees largely on the basis of class work and performance in examinations, have regarded as highly important many environmental influences that the college might afford, such as a beautiful campus, fine architecture, music and painting, suitable student housing, and wholesome social life.

As an example of the development from a simple to a diverse curriculum we may compare the 1640 with the 1940 curriculum of Harvard College, not to mention that of the university as a whole. In the second section of *New Englands First Fruits* we find set forth what amounts to an excellent paraphrase of the Harvard catalog of three hundred years ago, if indeed the young institution actually published one. In the scope of nine pages we find statements of: the founding of the college, its aims, its physical plant (an "Edifice . . . very faire and comely within and without"), the name and abilities of the President, who apparently was also the faculty, and the plan of government under twelve Overseers. Next are given the conditions of admission, and the regulations governing student conduct. Then come the course of study, set forth by days and hours as well as subjects, some of the procedures of teaching and learning, and the requirements for a degree. Finally we find a brief description of the Commencement of

1642, with a copy of the questions "given and maintained by the Commencers in their publick Acts." If the names of the students and graduates were added, together with some miscellaneous elements that we expect to find in a catalog of today, it is probable that the entire body of material, corresponding to a Harvard catalog of three hundred years ago, could be contained in a dozen pages. Such a thin pamphlet would contrast strikingly with the catalog of Harvard College today, just as the single course of study contrasts with Harvard's present twenty-seven different fields of concentration, each capable of many variations according to student election of subjects and courses.

Increasing provision for the individual student affords a key to the changes that three centuries have brought in American higher education. A recent history of college education in this country interprets the changes in terms of various conflicts that have occurred through the years, or that still persist: classics versus science, discipline versus freedom, aristocratic versus democratic ideals, old versus new, culture versus cash.[1] Where there is conflict there is an underlying cause, and important among the causes of higher educational conflict has been the question of subject matter versus individual student. This question has long been a vexatious one. Both sides may accept the principle that the life is more than the meat, but their interpretations will differ. Without going into the philosophies involved, or the various stages through which our present curriculums have been developed, we may discern three focal points in the history of our college curriculums.

First was the classical curriculum. As found at Harvard in 1640 and as typical of American colleges until the nineteenth century, the classical curriculum was intended for the education of the few, and aimed to develop "citizens of the republic of letters."

The Great Tradition of cultured intellectualism is still strong in our colleges, sometimes disguised under new terminology. During the nineteenth century, however, a number of simultaneous developments resulted in a wide displacement of the classical curriculum. These developments included: the introduction of universal education; the advancement of knowledge, especially the growth of science; and the expansion of vocational education at all levels. Higher education had been for a single class; it was extended to serve all classes. The classi-

[1] R. Freeman Butts, *The College Charts Its Course.* New York, McGraw-Hill Book Company, 1939. xiii + 464 p.

cal curriculum gave way to varied curriculums of many kinds. The seven liberal arts were multiplied to seven times seven.[2] In occupational fields the number of different curriculums can scarcely be counted. In a recent study fifty-nine institutions—only a few of them large—were found to be offering one hundred and sixty occupational curriculums.[3] If all the universities and colleges in the United States were included in a similar study, the number of such differentiated curriculums would undoubtedly be found to exceed this total.

These curriculums are for the most part subject-centered; the student may "major" in botany or French, or he may "specialize" in economics or geology. It is commonly assumed that the students in these differentiated curriculums are motivated in the subject field. It is found in practice, however, that the curricular diet frequently disagrees with the student, or at least he assimilates little intellectual nourishment and fails to grow. Many devices have been adopted to correct the maladjustment of individual and subject matter. Ability grouping as commonly advocated is an example of a device to allow students to go faster or slower through a fixed program of study. Another scheme for disposing of the problem is to define education in traditional, "intellectual" terms, and declare these students to be ineducable.[4] This keeps education on an excellent exclusive level, but it raises an inescapable question: Can a democracy consistently, or safely, define education in so exclusive a sense? Are we justified in limiting education solely to intellectual things?

Then there is a large group of students who cannot be disposed of by means of an exclusive definition of education. The students in this group are intellectual; they demonstrate their educability in intellectual terms. They creditably complete even the hardest courses of study. But any good college, as it sees some of its most gifted students receive their degrees, or sees them in their vocations and avocations following graduation, knows that it has done a poor job. Their most valuable potentialities remain unawakened, or have been thwarted or warped.

With our scores, if not hundreds, of differentiated curriculums it is baffling to be confronted with these maladjusted students. Colleges

[2] The college of letters and science of the University of California lists fifty-two.

[3] Melvin E. Haggerty, "The Educational Program": *The Evaluation of Higher Institutions,* Chicago, University of Chicago Press, Vol. 3, 1937, p. 55.

[4] Albert Jay Nock, *The Theory of Education in the United States,* New York, Harcourt, Brace & Company, 1932, p. 55.

and universities have come to realize that institutions can fail as well as students. Free election of studies, curriculums of varying length, practical arts in partial or complete replacement of traditional subjects, and innumerable additions, subtractions, multiplications, and divisions of curriculums, have all been found wanting.

We have therefore come to a third focus of educational attention, a consideration of the individual himself as the chief curricular determinant. "The present day curriculum is student-centered and student and faculty controlled."[5] Nor is the individual a chief concern of college and junior college alone; Wilbur, for example, has emphasized the particular place of individualization at advanced university levels.[6] The emphasis is not properly on techniques of individualization but on an underlying philosophy "that education is not something *done to* but is something *done by* an individual."[7]

The various plans of curricular individualization need to be read about and observed with a critical as well as a sympathetic eye. Kilpatrick, appraising the contract and similar plans, questions their desirability when tested by fundamental educational theory.[8] It will be well to ask just what we mean when we talk of individualization. There is probably as much superficiality in our efforts at individualization as in other kinds of educational effort. A plan that permits a student to set his own goals, to choose his own projects, and to proceed at his own pace, sounds like individualization of a high order, but analysis may show it to be fundamentally a scheme to fit the student to a fixed course of study. Are some of the plans for gifted students doing more harm than good by depriving them of needed contacts with fellow students of varying abilities? In our honors courses do we develop "arrogant young intellectuals"?[9]

Critics of individualized curriculums frequently express the fear that scholarship is being lowered in the efforts to develop curriculums for students of the lower-ability levels. Democratic education should accept this challenge and demonstrate the contrary. With the enlarge-

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[5] Robert Lincoln Kelly, *The Effective College,* New York, Association of American Colleges, 1928, p. 53.

[6] Ray Lyman Wilbur, "Higher and Higher Education" in: *Higher Education Faces the Future.* Paul D. Schilpp, ed., New York, Horace Liveright, 1930, p. 406-407.

[7] Huber Williams Hurt, *The 1933 College Blue Book,* p. 9-10.

[8] William H. Kilpatrick, "An Effort at Appraisal" in: National Society for the Study of Education, Twenty-fourth Annual Yearbook, Part II, 1925, pp. 273-276.

[9] Everett Lee Hunt, "Reading for Honors and Common Sense," *School and Society,* 42: 728 (November 30, 1935).

ment of educational opportunity, students with superior intellectual abilities will exist in at least as large numbers, it is to be hoped, as now. With improved systems of admission probably larger numbers of superior students may be enabled to go to college than at present. Under effective curricular individualization such students pursue the scholarly studies for which they are adapted, on a basis worthy of their abilities. Standards themselves can be individualized. They need to be, in fact. It is recognized that too little is being expected of the able and too much of the mediocre. Under an individualized curriculum a student is expected to achieve up to the level of his ability; "to demand more is to require the impossible, and to permit less is to be unjust to him."[10]

Whether one's attitude toward curricular individualization is a viewing with alarm or a pointing with pride probably depends largely on his theory of education. To one who holds for universal education all practicable provisions for the individual are regarded as matters of course. Uniformity of curriculums is held to imply either exclusiveness —education for an elite—or regimentation, both of which are incompatible with democracy. "A progressive society counts individual variations as precious since it finds in them the means of its own growth."[11] If the colleges and universities, on the other hand, are regarded as concerned solely with the intellectually able, individualization appears to be a catering to the unfit and a waste of energy. A critic has called our "hand-tailored" curriculums "a counsel of desperation."[12]

It is certainly exaggeration to describe the situation of higher education as desperate, but it is probably correct to say that it does appear bewildered. All three types of curriculums—classical, differentiated, individualized—are in operation. The classics may be losing ground, but are defended in high places. Differentiated curriculums continue to multiply. Individualized curriculums, supported by testing and evaluation programs and personnel services, appear to be gaining in favor. The situation has been described as chaos.[13]

Obvious need exists for a decision in some definite respects as to

[10] Lonzo Jones, "A Project in Student Personnel Service Designed to Facilitate Each Student's Achievement at the Level of His Ability," University of Iowa Studies, First Series, No. 166 (1928), p. 10.

[11] John Dewey, *Democracy and Education,* New York, The Macmillan Company, 1916, p. 357. (Quoted by permission of publishers.)

[12] Albert Jay Nock, *op. cit.,* p. 78.

[13] Robert Manley Hutchins, *Yale Review,* 25: 668 (June, 1936).

where higher education is going. Dewey, through whose leadership perhaps more than that of any other we have been brought to our present situation, is the chief prophet pointing the way out. According to Dewey the way out of educational confusion is the giving of "direction to an aimless and divided attention. . . . Only new aims can inspire educational effort for clarity and unity. They alone can reduce confusion."[14] Where conflicts exist, as between classical and modern conceptions of education, Dewey has suggested a procedure that will conserve what is of value in both:

> "It is the business of an intelligent theory of education to ascertain the causes for the conflicts that exist and then, instead of taking one side or the other, to indicate a plan of operations proceeding from a level deeper and more inclusive than is represented by the practices and ideas of the contending parties."[15]

It is significant that Dewey stresses the need for clarified "aims" rather than a single aim. Only plurality can comprehend the needs of democratic society and its widely individualized citizens. A proposal to restore education to peace and order through the prescription of some single metaphysic raises question whether the doctor knows his patient. Under aristocratic societies seats of learning had a fairly single function, but simplicity in life and education is apparently not for us of today. Ahead of us may lie even greater diversity than we now have. Under the conditions of our present and our probable future, college curriculums can hardly be simple. The importance of clarified aims is apparent.

Clarification of aims, moreover, can probably be achieved by no simple process. But the effort is being made. In the accreditation procedures adopted by the North Central Association of Colleges and Secondary Schools, for example, the starting point is the avowed aims of an institution applying for accreditation. "It is generally agreed that an institution should not only be accorded entire freedom in selecting its field of operation but that it should be required to do so and to announce its field or fields in some official manner."[16] This is the way

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[14] John Dewey, *The Way Out of Educational Confusion,* Cambridge, Harvard University Press, 1931, p. 41.

[15] John Dewey, *Experience and Education,* New York, The Macmillan Company, 1938, p. v (Quoted by Butts, *op. cit.,* p. 15). Quoted by permission of publishers.

[16] George F. Zook and Melvin E. Haggerty, "Principles of Accrediting Higher Institutions," in: *The Evaluation of Higher Institutions.* Chicago, University of Chicago Press. Vol. 1, 1936, p. 139.

of democracy and diversity. Each college or university, freed in some measure at least from the notion that it must follow some abstract pattern of college or university function, can study the needs of its own students, set its own aims, and develop its means and methods—its curriculum—in terms of its own constituency. If such study is searchingly done, in the spirit and with the tools of science, the interests of individual and of society may both be served.

Clarification of aims, while a serious task for any institution to undertake, is likely to be a rewarding one. In Haggerty's view—

"The careful definition and limitation of objectives is a first and necessary step in cultivating respect for excellence of performance. Quality in an institution is not guaranteed by statements in a college catalogue. . . . It grows out of the efforts of a competent faculty to instruct and guide serious-minded students, and it is conditioned by educational resources, such as the adequacy of the library, the character of the curriculum, the competence of the faculty, and the effectiveness of the administration. In all these matters most American colleges and universities appear to be below the level of quality that is desirable for the adequate care and cultivation of youth. The truth of this statement is attested by practically every factual study of higher education that has been made in recent years. It is supported by the inadequate performance of college graduates in the practical affairs of life. The time would seem to be at hand for institutional self-examination in order that the quality of education may be elevated."[17]

We may now suppose that the colleges are at work clarifying their aims, in the expectation that as the task is accomplished confusion will disappear, educational efforts will be oriented, and the quality of performance raised to a higher level. When the task is accomplished we shall also have in each institution a curriculum so constituted as to provide a much better basis for the development of the catalog and hence a better criterion for its evaluation.

Clarification of curricular aims should of course be immediately reflected in the college catalog. The catalog statement of aims should express the real aims as in actual practice. Haggerty points out that aims involve objectives and that "The discussion of unattainable objectives or of aims so vaguely apprehended that a teacher can do nothing about their achievement is educational verbalism at its worst."[18] Statements of institutional aims are presented in catalogs in various

[17] Melvin E. Haggerty, "The Educational Program," 1937, pp. 7-8.
[18] *Ibid.*, p. 50.

ways, sometimes on an opening page without a title, or in an appropriate location under a title such as "Purpose," or scattered incidentally through the catalog, or sometimes by implication, or sometimes not at all. Some statements of aims are excellent; some are fine sounding but unconvincing. Notable statements of aims are contained in the catalogs of institutions like Rollins, Bennington, and Antioch that have introduced unique emphases in college education.

A Carnegie study and a number of bulletins and addresses have been devoted to the college catalog. At least one large book and chapters and sections of other books have dealt with catalog problems. Score cards for use in evaluating the catalogs of junior colleges and four-year colleges have been published. These materials are all available and need not be here discussed.

There is general agreement in regard to what is appropriately included in a college catalog, but specific questions nevertheless arise for which score cards and other aids do not afford the answers. It is recognized, for example, that a history of the institution is appropriate in the catalog; but how long a history, and what kind? In respect to these numerous questions that must be decided in terms of the particular catalog that is under preparation, the curriculum of the institution, it is believed, affords the basis for decision. Any element has a claim for consideration for place in the catalog to the extent that it is related to the educational program. Items such as calendar, campus map, the governing board, the administrative and instructional staffs are obviously related to the course offerings. All items of general information can be evaluated for inclusion or exclusion in terms of their relation to the educational program. The historical statement can be abridged in some places and amplified in others in order to interpret the institution as an agency of education. The physical facilities, endowment, library, student life, student aid, student housing, fees, degrees, placement service, enrolments and summaries will be developed according to the points of emphasis in the educational aims and offerings of the institution. Admission and registration procedure, conduct of teaching, requirements for graduation, outlines of required or elective programs, and descriptions of departments and of courses require emphasis, abridgment, or elaboration in terms of the curriculum of the institution as the basic criterion for catalog development.

In all probability this process has been used by institutions for many

years, not always consciously and analytically but with a considerable degree of effectiveness. It is proposed, however, that the process be a deliberate one, systematically pursued year by year. No one will doubt that the result of such a sustained process would be improved catalogs.

Use of the curriculum as a criterion for catalog development and revision will aid, it is believed, in the solution of the perplexing questions of detail that constantly arise in building the catalog. Inclusion or exclusion of pictures, description of local environment, lists of concerts, special lectures, or other features, and many similar items may be determined, not for catalogs in general, but for each individual catalog according to the curricular philosophy and policy of the particular college or university. The curriculum criterion should promote consistency between what the college sets forth as its program and the program that it actually operates. The curriculum criterion might also promote consistency within the catalog itself; an institution that avows in its catalog that it aims to develop in students the qualities of honesty, responsibility, and good taste that are commonly regarded as the marks of an educated man or woman, might avoid in the same catalog extravagance or carelessness of statement, or unwarranted implications.

The bearing of the foregoing remarks on the work of the catalog editor is fairly clear. The responsibilities of the editor of a college catalog vary all the way from little beyond the mechanics of style and routine of printing to active participation with faculty, deans, and president in the development of a catalog according to the policies of the institution. The editor who has this larger measure of responsibility has an almost unlimited possibility of service in the furtherance of the curricular aims of his institution.

Sometimes the editor is a faculty member, perhaps head of a catalog committee. Often he is the registrar; sometimes he is a special officer. In the latter case he will have other editorial or similar duties, since editing the catalog, while it should be a year-around task, is not a full-time job. Whoever he be, let the editor not regard the function a lowly one, for in early colleges the president himself, just as he served also as registrar, business manager, and dean, was the editor as well. The editorial pen has certainly been wielded by many a Dunster, Wheelock, and Wayland.

The institution may rightly expect of the editor, and he must demand of himself, a level of performance equal to his opportunity. In

the first place, in addition to knowing the technical task of editing, he must become an authority on the curriculum of his institution; otherwise his catalog can not be interpretative of the institution and its program. In order to understand the curriculum of his own institution he must understand higher education. The task of the editor, adequately conceived in terms of the necessary mastery, the necessary familiarity with a field of knowledge, and the creative accomplishment expected, is comparable with that of a professor or dean, as is true also of the task of the registrar. In a number of institutions where the function of editor is well developed the work is correspondingly rewarded.

We are here concerned only incidentally with the editor, however, as the man in the strategic position between the catalog and the curriculum, with the obligation of making the one an effective interpretation of the other.

—*Volume 16, Number 2*

UNEMPLOYMENT IN THE LEARNED PROFESSIONS IN THE UNITED STATES OF AMERICA*

GLADYS R. WALKER

THE PRESENCE of thousands of members of the learned professions on the relief rolls during the depression raises some question as to whether professional schools have been accepting students who lack qualifications essential for even very modest professional success. However, a sociological investigation of the situation leads quickly to the realization that the crucial issues responsible for the predicament are more fundamental. To understand the basic circumstances, it is essential to determine the replies to the questions: (1) Are the learned professions in the United States actually overcrowded? (2) To what extent are members of the learned professions affected like other types of workers by economic depressions?

In seeking answers, the author made a survey of unemployment in the learned professions in the United States, with attention centered primarily on the situation from 1930 to 1940. This study, being concerned with social phenomena rather than with the employment prospects of individuals, is focused upon the group of persons who have completed their professional training to the extent of achieving a professional degree (such as M.D., Ph.D., etc.) and have attained whatever licenses are prerequisite to the practicing of their professions.

For the purposes of this analysis, the term "unemployment" is understood to include "under-employment" and is defined, briefly, as failure to earn a livelihood by practicing the learned profession for which trained, irrespective of whether having an employer or being self-employed.[1] The term "learned professions" is used here to include five categories—the three traditional learned professions of theology, law and medicine, being supplemented by dentistry and teaching or administrative educational work performed by doctors of philosophy.

It is acknowledged that failure of occasional individuals may be due to incompetence or other personal traits, and also that, on the

* This article is based upon a graduate thesis, with the same title and author, available from the University of Pittsburgh or the Carnegie Library of Pittsburgh.

[1] Carr-Saunders, A. M., and Wilson, P. A., "Professions," *Encyclopedia of the Social Sciences,* vol. xii, New York, The Macmillan Company (1934), p. 467. These authors classify together problems of establishment and of unemployment.

other hand, exceptional ability may win recognition despite highly adverse conditions. However, it is assumed that the total amount of professional services being utilized in any specific period is roughly determined by factors other than personal traits—chiefly matters of economic resources of potential clientele and of geographic distribution of professionals.

In the last 70 years, the proportion of this category in the general population has more than doubled.[2] The number of dentists has increased steadily for the country as a whole.[3] During the decade 1920 to 1930, the number of lawyers increased at a much more rapid rate than the population, although in the two preceding decades this rate had been much slower.[4] The number of clergymen per unit of population has remained fairly constant since 1870.[5] Numbers of college professors increased greatly.[6] However, the relative number of physicians and surgeons per unit of population was larger in 1870 and smaller in 1930 than at any intervening period,[7] this apparent anomaly being partly explained by the fact that in the earlier decades there were no rigid prerequisites for the practice of medicine, while low-standard schools were graduating ill-prepared students with qualifications far below those considered essential today. Another factor affecting the decrease in proportion of physicians and surgeons is seen especially among country doctors, where improved transportation facilities now permit a physician to serve a wider area than formerly, while the costly equipment now used also stimulates the tendency toward cen-

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[2] Evans, Kenneth, *Changing Occupational Distribution in the South with Special Emphasis on the Rise of Professional Services,* unpublished Ph.D. thesis in Sociology, University of North Carolina, Chapel Hill (1938), p. 48. Cf., *Fifteenth Census of the United States: 1930: Population,* vol. 5, United States Department of Commerce, Bureau of the Census, Washington, United States Government Printing Office (1931-1933).

[3] Evans, Kenneth, *op. cit.,* p. 47. Cf., "Occupational Changes Since 1850 as Shown by Census Reports," *Monthly Labor Review,* vol. xxxvii (November, 1933), pp. 1017-1027.

[4] *Index of Research Projects,* vol. i, Washington, Works Progress Administration (1938), pp. 161-162. Cf., Evans, Kenneth, *op. cit.,* p. 154, showing that in 1920 there were 115.9 lawyers per 100,000 population for the country, whereas in 1930 there were 130.7 per 100,000 persons.

[5] Evans, Kenneth, *op. cit.,* p. 47.

[6] Brunck, Hermann K., "The Chances in Utilities, Transportation, Distribution, and Service," in Carter Goodrich and Others, *Migration and Economic Opportunity,* Philadelphia, University of Pennsylvania Press (1936), p. 488.

[7] Evans, Kenneth, *op. cit.,* pp. 114-116. Cf., *Fifteenth Census of the United States: 1930: Population,* vol. 5, *op. cit.*

tralization.[8] Furthermore, the socially elite now have a wider choice of socially approved professions than formerly.

In recent years a greater proportion of learned professionals have become salaried workers, instead of independent practitioners, while those who were traditionally salaried workers, particularly the Ph.D.'s, have been finding a wider range of use for their professional services in business, in administration,[9] in research laboratories of industry or government, and in various other governmental capacities.[10] Physicians, too, are being appointed to salaried positions with hospitals, asylums, public health services, health insurance institutions, and private clinics,[11] while lawyers have been finding an increasing number of organizations offering them employment on a full-time basis in order to forestall legal entanglements.[12]

The dependence of the salaried worker upon the prosperity of his employer is obvious. Perhaps less clearly realized is the similar dependence of the independent professional upon the fees of his clients. Whether the professionals derive their incomes from one or from several sources, in either case lack of funds with which they can be paid forces them into the ranks of the unemployed. Needs for their services continue, but cannot be converted into effective demand because of shortage of money. Accordingly, while a numerical comparison of units of population with available practitioners of the learned professions in each geographic sub-division of the country may yield comparative data and suggest potential demand (especially in the South), it does not determine whether certain professions, in any locale, are overcrowded or undersupplied. Such determination depends upon whether the basis for judgment should be weighted according to the needs of the population for service (potential demand) or the needs of the learned professionals for recompense (effective demand).

The depression of the 1930's has left a residue of learned professionals on the relief rolls, revealed by the table, as well as a

[8] *Ibid.*

[9] Faris, Ellsworth, "Too Many Ph.D.'s?" *American Journal of Sociology,* vol. xxxix (January, 1934), p. 510.

[10] Dale, Edgar, "The Training of Ph.D.'s," *The Journal of Higher Education,* vol. i (April, 1930), p. 198.

[11] Fuss, Henri, "Unemployment Among Intellectual Workers," *Journal of the American Association of University Women,* vol. xxiii (October, 1929), p. 7. Cf., Brown, Esther Lucille, *Physicians and Medical Care,* New York, Russell Sage Foundation (1927), p. 173.

[12] Fuss, Henri, *ibid.*

great number of other persons who do without professional services because they cannot pay for them.

Although the numbers of learned professionals on relief, as indicated in the table below, represent but a small proportion of the total number of practitioners of their professions, and too few people to constitute a numerically important part of the population, their possible qualitative poten-

NUMBER AND PER CENT OF MEMBERS OF LEARNED PROFESSIONS ON RELIEF IN THE UNITED STATES: JANUARY 15, 1936[a]

CLASSIFICATION[b]	NO. OF PERSONS ON RELIEF[c]	NO. OF PERSONS IN 1930 CENSUS	PERCENTAGE ON RELIEF[d]
Clergymen and religious workers	3,226	148,848	2.2
Lawyers, judges, and justices	1,281	160,605	0.8
Physicians, surgeons, and dentists	1,218	153,803	0.8
College instructors and professors	1,031	61,905	1.7
Total	6,756	525,161	1.3

[a] Derived from Hauser, Philip M., and Jenkinson, Bruce L., *Usual Occupations of Workers Eligible for Works Program Employment in the United States, January 15, 1936*, Washington, Works Progress Administration, Labor Inventory Section (1937), p. 6, and *Fifteenth Census of the United States: 1930: Population*, vol. v, United States Department of Commerce, Bureau of the Census, Washington, United States Government Printing Office (1933), p. 20.

[b] These classifications, although not set up exactly like those of the present study, nevertheless give some indication of conditions within these professions.

[c] Persons who had not been on relief long enough to be certified for Works Program employment are not included in this count.

[d] This column shows that percentage of the numbers of persons who were in the respective professional groups at the time of the 1930 census who were on relief and had been certified for Works Program employment January 15, 1936.

tialities should be considered. Is their enforced idleness not more significant than that of less highly trained persons, in view of the personal and societal investments made in their training and the possibility that there are in existence vital needs for their services? In terms of the existing values in our culture, the unavailability of the services of even so small a percentage of learned professionals may be seen as a distinct loss to society.

Now the learned professions are probably glutted with more trained persons than can be self-supporting by working in their own fields under prevailing conditions. An unknown number of young graduates, completing their professional training during the depression, were years late in getting started in their chosen fields, and each year adds to their numbers. The extent to which unemployment in the learned professions may be attributed, respectively, to adverse economic conditions, to maldistribution, or to overcrowding has not been

determined, since, as indicated above, there exist no absolute standards permitting such conclusions.

The economic dependence of the learned professionals upon the general population causes their members to suffer, along with persons in industrial fields, as a result of economic depressions. Except to the extent that expanding demand for professional services may be stimulated by educational or propaganda techniques, it may be said of persons in the learned professions, as of industrial workers, that general economic conditions determine the total amount of employment available while personal factors determine, at least partially, which individuals shall be the victims of bad times.

A comparison of the two groups indicates that professional workers have certain advantages over industrial workers. During the recent depression, it was noted in urban areas that the proportion of professional workers on relief, as compared to the total number of professionals in these localities, was smaller than that of other categories of workers,[13] and that those professionals who were compelled to seek relief had been able to hold out longer before exhaustion of their resources than comparable persons in other occupied groups.[14] The professional workers have the further advantages that the limits to their employment opportunities are less sharply defined than in physical production,[15] that their market does not expand and contract as suddenly,[16] and also, that there are possibilities of stimulating their market, even under adverse economic conditions, by educational campaigns and propaganda techniques. Furthermore, occupational opportunities for professionals have been increasing in recent years.[17]

On the other hand, industrial workers have certain advantages over professional workers. This becomes especially evident when industrial workers are compared to independent professionals. To get started, the industrial worker in most cases need only find an employer;[18] he

[13] Palmer, Gladys L., and Wood, Katherine D., *Urban Workers on Relief,* Research Monograph No. 4, Washington, Works Progress Administration, Division of Social Research (1936), Part I, p. 40.

[14] *Government Aid During the Depression to Professional, Technical and other Service Workers,* Washington, Works Progress Administration, Division of Professional and Service Projects (1936), pp. 11-12.

[15] Brunck, Hermann K., *op. cit.,* p. 490.

[16] Kotschnig, Walter M., *Unemployment in the Learned Professions,* London, Oxford University Press (1937), pp. 307-308.

[17] Committee on Population Problems, *The Problems of a Changing Population* (Report to the National Resources Committee), Washington, United States Government Printing Office (1938), p. 214.

[18] Carr-Saunders, A. M., and Wilson, P. A., *op. cit.,* p. 470.

does not have to make so great an investment in addition; and he may have an early opportunity to demonstrate his competence in such a way as to secure his future.[19] Furthermore, the industrial worker is generally more adaptable, and therefore better able to fit into a new line of work if necessary.[20]

However, both groups oscillate similarly with the economic current. It seems reasonable to assume that when employment opportunities are contracting, the least competent and those with traits which are prejudicial to their advancement are apt to be among the first sufferers.[21]

Many personal factors which evoke prejudices or otherwise handicap a professional person are beyond the control of the individual, such as family background and social status. There are other prejudicial personal factors which may be modified to some extent if the individual is aware of them, such as:

—Indications of immaturity or poor emotional control; of not being fully serious; of having poor social insight; of seeming to lack desirable cultural background (which may be evidenced in language, manners, or dress).

—Apparent lack of dexterity, stability, ingenuity, skill, aptitudes, reliability, or initiative in his work.

—Apparent or genuine lack of health and/or moral stamina.

Other characteristics which may produce prejudice or favoritism, according to the environment in which establishment is attempted, include: age, sex, race, physique, marital status, religious and/or political affiliations, economic views, personal connections or "pull," affiliations with professional unions, guilds, or other organizations, place of origin and/or residence.

Place of residence, however, is not necessarily beyond the power of the individual to alter. The learned professions comprise a highly mobile group. Consequently, if geographic maldistribution is responsible for unemployment among them, then this problem could

[19] *Ibid.*, p. 468.

[20] Kotschnig, Walter M., *op. cit.*, p. 164. This point is further substantiated by a study which showed that the average percentage of industrial policyholders who were in the same occupation at the time of death as they had been in when the policies were issued was 41.5 per cent, whereas, for the professional group, it was 71.4. Dublin, Louis J., and Vane, Robert J., Jr., "Shifting of Occupations among Wage Earners as Determined by Occupational History of Industrial Policyholders," *Monthly Labor Review*, vol. xviii (April, 1924), pp. 732-740.

[21] Beveridge, W. H., *Unemployment: A Problem of Industry*, London, Longmans, Green & Company (1909), p. 134.

be remedied by spreading knowledge of localities where livelihoods could be earned by practicing their professions.

Geographic maldistribution accounts for unevenness of available services not reflected in nation-wide summaries. Members of the learned professions have been migrating more and more towards urban areas, to the detriment of rural districts and small communities. This trend follows the well-known tendency of wealth to concentrate in cities, and is further explained by the better opportunities to obtain additional training and the use of better equipment. Recognition of this trend may frequently cause laymen dwelling in rural areas to seek professional services in cities when matters of great moment are at stake.

A more equitable redistribution of professional people, in proportion to general population, might relieve overcrowding of the professions in certain urban centers, but the allocation of the migrants to areas where there is little competition on account of the inability of the general population in these areas to pay for their services would hardly help the economic plight. However, there are indications that certain rural areas and urban[22] or suburban localities do without professional services, except in cases of dire extremity, because monopoly and/or transportation considerations make its cost excessive. While it seems logical to expect to find such communities in modest circumstances, it is quite possible that some unemployed professionals could become self-supporting, even though not wealthy, by settling in these localities if information regarding these locations would be recorded and made available.

There is need for more factual information, not only for the nation as a whole, but also broken down by regions, states, and even small communities. To be of value to the learned professions, such information would have to include practically the entire working population, since the income of the learned professionals is derivative and depends upon the economic condition of their clientele.

Among the agencies now actively engaged in some such studies (though not confining their work exclusively to the learned professions) are: The National Occupational Conference, the Institute of Women's Professional Relations, Science Research Associates, the Bureau of Employment Security, professional societies, and private employment agencies. Additional studies by some or all of these agen-

[22] Bossard, James H. S., "A Sociologist Looks at the Doctors," *Transactions of the College of Physicians of Philadelphia, Fourth Series,* vol. ii, no. 1 (1934), pp. 1-10.

cies are needed. A governmental division, such as the Federal Works Agency, which now includes both the former United States Employment Service and the Office of Education, would probably be in the best position to provide the requisite broad factual base of co-ordinated economic and sociological data.

At the present time, an individual who desires factual information regarding the number of students now preparing to enter the various learned professions (as well as other data which might indicate the likelihood that a specific geographic location may be overcrowded by the time he has been fully educated for his profession), is thrown back upon the resources of his local community or his university. There is no nation-wide, fact-finding agency to study and co-ordinate the data which a lone individual can hardly assemble for himself.

The availability of reliable data describing the entire national panorama might facilitate interested bodies serving the population more effectively.

Efforts to curtail future unemployment in the learned professions might take the form of either restrictive or distributive measures. Restrictive measures would be inadvisable unless preceded by studies indicating indisputable overcrowding of the learned professions for the country as a whole. These measures might take the form of raising standards so as to disqualify numbers of persons now considered qualified learned professionals or of limiting the numbers of new practitioners through graduate schools and immigration authorities. Student enrolments might be restricted by increasing fees and/or length of training periods, by making entrance examinations more difficult, or by qualitative selection of students which would take into consideration certain factors not subject to quantitative analysis through examinations. The use of any such measures presupposes the co-operation of all professional schools in the country, so that reduction of numbers in one school would not produce increase elsewhere.

If, on the other hand, maldistribution is the chief cause of professional unemployment, then this problem might be met through guidance, through selection of students prone to settle in understaffed localities, through licensing restrictions in certain districts, and through public employment offices providing information about the location of employment opportunities.

—*Volume 16, Number 2*

EDITORIAL COMMENT

TO THE READERS OF THE JOURNAL:

With this issue my editorship of the JOURNAL comes to an end, and the responsibility of the office is assumed by Registrar Leo M. Chamberlain of the University of Kentucky. His will be the pleasant duty of coming upon again and again the names of Registrars from the Hudson Bay to the Gulf of Mexico, from the Maritime Provinces to the Golden Gate; of reading manuscripts and communications which bespeak the personal and professional interests of scores of his colleagues. From these experiences there comes the remuneration of kind words and congratulatory letters which lighten the load that rests on every editor's shoulders. Little do those who write "thank-you" letters after a satisfying experience or in recognition of a job well done know the joy and gratification which come to the recipient of such greetings.

The JOURNAL is now recognized by prominent educators in the United States as one of the half dozen leading periodicals in higher education. It is not subsidized, nor has it the advantage of an exceptionally large clientele. Although it has been published little more than a score of years, it has become established as a medium for the presentation of valuable literature which concerns research in, and the philosophy of, higher education.

This is not intended to be a valedictory. It is a statement mixed with factual evidence and sentimental utterances. I know of no officers and executive committees whose associations could be more pleasant than those found in the American Association of Collegiate Registrars. I know of no subscribers and contributors to a publication who could be more critical and grateful than those of the JOURNAL of the American Association of Collegiate Registrars. I know of no colleagues who could be more co-operative than the members of the editorial board of this publication. To all of these people I express my thanks and to my successor, my good wishes.

Millard E. Gladfelter, Editor

THE QUESTION BOX

The Question Box offers to the readers of the JOURNAL an opportunity to exchange information on perplexing problems which are common to the daily routine of most registrars.

If you have helpful suggestions, will you please send them to Editor Leo M. Chamberlain, Registrar at the University of Kentucky, Lexington, Kentucky. A copy of the reply will be mailed to the inquirer and if space permits, it will be published in the next issue of the JOURNAL. The answers to each of the following questions have been requested by several readers:

1. What policy should be followed by an institution in issuing sealed and signed transcripts to students?
2. What consideration are institutions giving to credit for work completed in the C.A.A. program?
3. What are the general duties of the Dean and the Registrar in a Liberal Arts College?
4. What pattern can be followed or where can authoritative information be obtained in the evaluation of foreign transcripts?
5. What are the generally accepted standards for accepting students who are in the field of teaching?
6. Should the transcript contain a record of any disciplinary action regardless of its nature?
7. Is it the general policy for institutions to accept students in summer schools without recognizing their status in the institution they previously attended?
8. What is the simplest method for the registrar to furnish a list of students who are eligible for honor societies?
9. What methods are Liberal Arts Colleges using to follow the graduate school careers of their alumni?

QUESTION EXCHANGE

Matriculation without Disclosing Previous Affiliation or Athletic Participation

It is the duty of every college to prepare application blanks or other admissions forms in such a way as to encourage clear, truthful answers to pertinent questions. Such forms should set forth in conspicuous manner a brief statement of the rules governing the admission of transfer students. At some place on the form the student should be required to sign his name as evidence of his understanding of the rules. His signature should attest, also, the correctness of his answers to all questions. This type of form will provide the college with a student declaration, signed in good faith, that can be used as reliable evidence should any subsequent review of an admissions case become necessary.

The wisdom of using a carefully prepared admission form has been proven by experience. The difficulties encountered in instances of failure at previously attended institutions are well known to admissions officers. The traditional excuse for withholding the fact of previous enrolment is that such students desire to "start all over again" without asking for credit even in the courses that might have been passed.

The properly prepared application form will call for the listing of all schools previously attended, regardless of the earning of credit. Upon it will appear also a reference to the penalty for inaccurate or partial answers to questions.

If a college has exercised due care in advising a transfer student of its admission rules, and, after his matriculation, learns officially that he has kept secret the fact that he did poor work or failed at a previously attended institution, the college is within its rights in requiring such a student to resign. Failure to make a complete and truthful declaration of the facts is initial evidence of the possession of a character trait that does not warrant leniency.

The question of athletic participation refers more to eligibility for participation in an extra-curricular activity than to admission to a college. Declarations of this nature are usually called for on a separate form. If the student evades a direct answer to the question of athletic participation in a previously attended college, the appropriate penalty should be inflicted.

J. G. QUICK,
University of Pittsburgh

The Questionnaire Problem

A few months ago, I made an analysis of the questionnaires and forms which come regularly to this office, and classified the data required for them. As might be suspected, a considerable amount of duplication was found, and further, it was discovered that certain of the routine questions could be grouped so that a single analysis of our records would provide the answers. After having done this, I made a list of the data required and devised a form on which they could all be listed. The listing is made from the records of student enrolment as they come in and is thus cumulative.

From this cumulative record, then, we are able to extract most of the data regularly required for statistical reports. When a questionnaire or request for information is received for which we have not the data readily available, we either make a special analysis of our records for the purpose, or, if we consider it not sufficiently important to warrant such extra work, we regretfully inform the sender that the data cannot be easily obtained.

E. F. SHEFFIELD,
Sir George Williams College,
Montreal, Canada

Classifying Registration Data for Questionnaires

It is assumed that this question refers to the problem of what items or headings should be included in the tabulation of registration data.

Answering of questionnaires will be facilitated if the items tabulated are as follows:

1. Enrolment for the semester, or quarter, or school term, summer session.
2. Enrolment of men, women, and total enrolment.
3. In each of the foregoing categories, enrolment according to schools or divisions, and curriculums if such definite programs exist.
4. Classification of each student under foregoing items with reference to his class: freshman, sophomore, etc. Some form of flagging each registration card for classification helps materially in tabulating data.
5. Include the two headings "special" and/or "unclassified."
6. Similar treatment of foregoing items for the entire academic year, eliminating duplicates, so that the total number of different students for the year can be shown.

For more detailed answers to the question and for other helpful information con-

cerning reports, see material issued by the National Committee on Standard Reports for Institutions of Higher Education. Mr. Lloyd Morey of the University of Illinois acted as chairman of this committee.

J. A. HUMPHREYS,
Woodrow Wilson Junior College,
Chicago

Improving Registration in the Junior College

For students enrolled during the first semester, cited as an example, let there be pre-registration counseling or preliminary registration for the second semester at about the middle of the first semester. Have faculty counselors approve preliminary registration cards in duplicate so that shortly before intensive registration for the second semester one of these cards can be returned to the student as a permit to register, together with the appointment of day and hour to register.

These appointments to register are issued in blocks of 75 to 100 per hour, depending on the number of faculty members available to handle final counseling and registration.

Cards of appointment to register are issued also to qualified new students for the two days following appointments given to former students. During their first days, new freshmen are engaged in freshman-week activities.

1. In our situation at Woodrow Wilson Junior College, where there is no tuition for residents, the student goes first to the cashier and pays the student activity fee required of all.
2. Then the student stops at a large classroom until his number is called from the large gymnasium, where all counseling and registration are handled. Centralization of these latter procedures makes for ease and efficiency.
3. In the gymnasium, a temporary office of the registrar with all necessary records is set up. Faculty advisers are seated at long tables grouped in areas according to basic kinds of curriculums available to students.
4. Each student presents to his adviser for approval a list of specific classes for which he wishes to register. This list, appearing on a form known as a "Call Slip," shows the student's daily, hour-by-hour program. Or if the student has not already chosen his courses, he secures the assistance of a faculty adviser.
5. With the approved list of classes, the student goes to the area where class cards are kept, and is given his class cards.
6. The student sits down at a table to fill out his class cards (in duplicate form for later convenience to faculty members and registrar's office). At the same time, he fills out the official registration card and general information card for the director of student activities.
7. Students' cards are next checked in detail by clerks from the registrar's office, who are stationed at tables not far from the exit of the gymnasium. All cards and call slips are left with the registrar's clerks.
8. The Registrar's Office then:

a. Sorts class cards for distribution to faculty members.
   Duplicate sets are kept in the Registrar's Office.
b. Counts registration cards and files them alphabetically.
c. Alphabetizes students' call slips.

J. A. HUMPHREY,
Woodrow Wilson Junior College,
Chicago

Condensed Tables for Computing Grade Point Averages

The University of Oregon has set up tables for GPA quotients in small units, to decrease the eye strain and liability of error in tables covering an entire page or more. Some delegates at the recent convention of the Pacific Coast Association suggested that these be sent to the JOURNAL for wide publication. The numerical principle is simply that in such tables the decimal part of the quotients repeats at intervals, while the digit part steps up at the same intervals; for example, with 15 hours the GPA for 25 grade points is 1.67, for 25 + 15 (= 40) points the GPA is 2.67. We have built the tables below for the range required with 4 points for each hour of A grade; but of course the quotients are not dependent on the letter values used. No tables are included for the simple divisors of 1, 2, 3, 4, 5, and 10.

In using these tables, find the particular table according to the number of hours, set boldface. Enter the body of the table for the number of points. Read the GPA in italics at the top and right of that column and row, the digit at the top and the decimals at the right.

0.	*1.*	*2.*	*3.*	
6	6	12	18	*.00*
1	7	13	19	*.17*
2	8	14	20	*.33*
3	9	15	21	*.50*
4	10	16	22	*.67*
5	11	17	23	*.83*

0.	*1.*	*2.*	*3.*	
7	7	14	21	*.00*
1	8	15	22	*.14*
2	9	16	23	*.29*
3	10	17	24	*.43*
4	11	18	25	*.57*
5	12	19	26	*.71*
6	13	20	27	*.86*

0.	*1.*	*2.*	*3.*	
8	8	16	24	*.00*
1	9	17	25	*.13*
2	10	18	26	*.25*
3	11	19	27	*.38*
4	12	20	28	*.50*
5	13	21	29	*.63*
6	14	22	30	*.75*
7	15	23	31	*.88*

0.	*1.*	*2.*	*3.*	
9	9	18	27	*.00*
1	10	19	28	*.11*
2	11	20	29	*.22*
3	12	21	30	*.33*
4	13	22	31	*.44*
5	14	23	32	*.56*
6	15	24	33	*.67*
7	16	25	34	*.78*
8	17	26	35	*.89*

0.	*1.*	*2.*	*3.*	
11	11	22	33	*.00*
1	12	23	34	*.09*
2	13	24	35	*.18*
3	14	25	36	*.27*
4	15	26	37	*.36*
5	16	27	38	*.45*
6	17	28	39	*.55*
7	18	29	40	*.64*
8	19	30	41	*.73*
9	20	31	42	*.82*
10	21	32	43	*.91*

0.	*1.*	*2.*	*3.*	
12	12	24	36	*.00*
1	13	25	37	*.08*
2	14	26	38	*.17*
3	15	27	39	*.25*
4	16	28	40	*.33*
5	17	29	41	*.42*
6	18	30	42	*.50*
7	19	31	43	*.58*
8	20	32	44	*.67*
9	21	33	45	*.75*
10	22	34	46	*.83*
11	23	35	47	*.92*

0.	*1.*	*2.*	*3.*	
13	13	26	39	*.00*
1	14	27	40	*.08*
2	15	28	41	*.15*
3	16	29	42	*.23*
4	17	30	43	*.31*
5	18	31	44	*.38*
6	19	32	45	*.46*
7	20	33	46	*.54*
8	21	34	47	*.62*
9	22	35	48	*.69*
10	23	36	49	*.77*
11	24	37	50	*.85*
12	25	38	51	*.92*

0.	*1.*	*2.*	*3.*	
14	14	28	42	*.00*
1	15	29	43	*.07*
2	16	30	44	*.14*
3	17	31	45	*.21*
4	18	32	46	*.29*
5	19	33	47	*.36*
6	20	34	48	*.43*
7	21	35	49	*.50*
8	22	36	50	*.57*
9	23	37	51	*.64*
10	24	38	52	*.71*
11	25	39	53	*.79*
12	26	40	54	*.86*
13	27	41	55	*.93*

0.	*1.*	*2.*	*3.*	
15	15	30	45	*.00*
1	16	31	46	*.07*
2	17	32	47	*.13*
3	18	33	48	*.20*
4	19	34	49	*.27*
5	20	35	50	*.33*
6	21	36	51	*.40*
7	22	37	52	*.47*
8	23	38	53	*.53*
9	24	39	54	*.60*
10	25	40	55	*.67*
11	26	41	56	*.73*
12	27	42	57	*.80*
13	28	43	58	*.87*
14	29	44	59	*.93*

0.	*1.*	*2.*	*3.*	
16	16	32	48	*.00*
1	17	33	49	*.06*
2	18	34	50	*.13*
3	19	35	51	*.19*
4	20	36	52	*.25*
5	21	37	53	*.31*
6	22	38	54	*.38*
7	23	39	55	*.44*
8	24	40	56	*.50*
9	25	41	57	*.56*
10	26	42	58	*.63*
11	27	43	59	*.69*
12	28	44	60	*.75*
13	29	45	61	*.81*
14	30	46	62	*.88*
15	31	47	63	*.94*

0.	*1.*	*2.*	*3.*	
17	17	34	51	*.00*
1	18	35	52	*.06*
2	19	36	53	*.12*
3	20	37	54	*.18*
4	21	38	55	*.24*
5	22	39	56	*.29*
6	23	40	57	*.35*
7	24	41	58	*.41*
8	25	42	59	*.47*
9	26	43	60	*.53*
10	27	44	61	*.59*
11	28	45	62	*.65*
12	29	46	63	*.71*
13	30	47	64	*.76*
14	31	48	65	*.82*
15	32	49	66	*.88*
16	33	50	67	*.94*

0.	*1.*	*2.*	*3.*	
18	18	36	54	*.00*
1	19	37	55	*.06*
2	20	38	56	*.11*
3	21	39	57	*.17*
4	22	40	58	*.22*
5	23	41	59	*.28*
6	24	42	60	*.33*
7	25	43	61	*.39*
8	26	44	62	*.44*
9	27	45	63	*.50*
10	28	46	64	*.56*
11	29	47	65	*.61*
12	30	48	66	*.67*
13	31	49	67	*.72*
14	32	50	68	*.78*
15	33	51	69	*.83*
16	34	52	70	*.89*
17	35	53	71	*.94*

0.	1.	2.	3.	
19	19	38	57	.00
1	20	39	58	.05
2	21	40	59	.11
3	22	41	60	.16
4	23	42	61	.21
5	24	43	62	.26
6	25	44	63	.32
7	26	45	64	.37
8	27	46	65	.42
9	28	47	66	.47
10	29	48	67	.53
11	30	49	68	.58
12	31	50	69	.63
13	32	51	70	.68
14	33	52	71	.74
15	34	53	72	.79
16	35	54	73	.84
17	36	55	74	.89
18	37	56	75	.95

0.	1.	2.	3.	
20	20	40	60	.00
1	21	41	61	.05
2	22	42	62	.10
3	23	43	63	.15
4	24	44	64	.20
5	25	45	65	.25
6	26	46	66	.30
7	27	47	67	.35
8	28	48	68	.40
9	29	49	69	.45
10	30	50	70	.50
11	31	51	71	.55
12	32	52	72	.60
13	33	53	73	.65
14	34	54	74	.70
15	35	55	75	.75
16	36	56	76	.80
17	37	57	77	.85
18	38	58	78	.90
19	39	59	79	.95

0.	1.	2.	3.	
21	21	42	63	.00
1	22	43	64	.05
2	23	44	65	.10
3	24	45	66	.14
4	25	46	67	.19
5	26	47	68	.24
6	27	48	69	.29
7	28	49	70	.33
8	29	50	71	.38
9	30	51	72	.43
10	31	52	73	.48
11	32	53	74	.52
12	33	54	75	.57
13	34	55	76	.62
14	35	56	77	.67
15	36	57	78	.71
16	37	58	79	.76
17	38	59	80	.81
18	39	60	81	.86
19	40	61	82	.90
20	41	62	83	.95

0.	1.	2.	3.	
22	22	44	66	.00
1	23	45	67	.05
2	24	46	68	.09
3	25	47	69	.14
4	26	48	70	.18
5	27	49	71	.23
6	28	50	72	.27
7	29	51	73	.32
8	30	52	74	.36
9	31	53	75	.41
10	32	54	76	.45
11	33	55	77	.50
12	34	56	78	.55
13	35	57	79	.59
14	36	58	80	.64
15	37	59	81	.68
16	38	60	82	.73
17	39	61	83	.77
18	40	62	84	.82
19	41	63	85	.86
20	42	64	86	.91
21	43	65	87	.95

CLIFFORD L. CONSTANCE,
University of Oregon

The Dean's Record Folder

Records of students at The Pennsylvania State College are kept on tracing cloth, a rather common practice today in larger institutions. The offices of the deans receive, at the end of each semester, a facsimile of this record, made by the blue print process. Each semester the dean discards the record previously received for the one more recently sent him. The question of keeping supplementary records was a problem of the offices of the several deans. The Dean of the School of the Liberal Arts at The Pennsylvania State College keeps these facsimiles in a folder. The student's photograph is pasted within the folder under his name, and the folder has printed within it a form which makes it possible to keep a cumulative record of all school actions. Samples can be procured on application to the Dean of the School of the Liberal Arts at The Pennsylvania State College.

WILLIAM S. HOFFMAN,
The Pennsylvania State College

Transfer of credit for one quarter or semester of a course which the issuing institution does not credit until the full year's work is complete. For instance: credit for one semester of a beginning language.

1. Most of our freshman and sophomore offerings in Arts and Sciences are year courses of six or eight semester hours each. A student passing one semester of such a course receives credit but cannot use it for anything much until he passes the second half of the course. Similarly, a student coming from another institution with such fragments would have them placed on his record (assuming adequate marks), but he would have to finish the second half of such courses before receiving final credit. This applies to "a beginning language."

2. In some institutions two fairly separate and complete topics, one semester each, are joined together in a one-year course. *E.g.,* Philosophy 10 might be made up of logic and ethics in equal parts. Mathematics 1 might be composed one half of plane trigonometry and one half of analytic geometry. A student coming to us with completion of one semester of such a course would be given final credit as an

independent unit. Of course, if he needs more for a degree or for other purposes, he will have to complete the additional work.

3. Other cases are not so clear. We have a number, but fewer now than heretofore, of upper division courses in year units. Our general rule is that not less than all of a year course may stand alone, and we tend to observe this policy in dealing with transfer undergraduates. Some of our earlier year units are now independent halves. Of course the first half has been rounded out and not left in "to-be-continued" termination. Many course offerings, it is true, are too fragmentary and isolated. But the size of the chunks of learning we hand out has not been standardized, and I think we ought to consider carefully before refusing final credit to a sizable fraction unless it is part of a basic year course.

E. J. MATHEWS,
The University of Texas

Style for Student Directory

For several years the Pennsylvania State College has printed its directory by typing the material carefully, and printing the directory by the photo off-set process. Typical lines in the directory were as follows:

2 Harshberger, Sara Evelyn, LD, 2427 Fifth Avenue, Altoona, 353 Atherton Hall (5051

2 Hart, Donald, ME, 602 Manoa Rd., Upper Darby, Phi Sigma Kappa—3331

Preceding the name, the class of the student was given, and following the name, his curriculum. Last year Miss Alma H. Preinkert, Registrar of the University of Maryland, asked for a copy of our directory. This year the directory at the University of Maryland was made by the photo off-set process, and a copy has reached me. Miss Preinkert would arrange these lines in the directory to read as follows:

2LD Harshberger, Sara Evelyn, 2427 Fifth Avenue, Altoona, 353 Atherton Hall (5051

2ME Hart, Donald, 602 Manoa Rd., Upper Darby, Phi Sigma Kappa—3331

This arrangement is much more satisfactory and will be followed in the future at Pennsylvania State College. Since it gives the student's class and course in a column to the left of the student's name, I should much prefer to pick out a list of freshman Civil Engineers from Miss Preinkert's directory than to attempt to select such a list from my own. Each year, when the directory is printed, approximately a dozen copies are prepared with blank pages of good bond paper inserted between pages in the volume. The offices of the Deans receive one copy of this special directory. Changes of address, as reported to the Registrar, are forwarded to the Deans' offices, where they are recorded, there being ample room in the directory for this purpose on the blank pages. Names of students admitted at the opening of the second semester are also added on these pages. All students who withdraw, and those who were dismissed have this action recorded opposite their names. In the Registrar's Office there is a file of these corrected directories, beginning with the directory for 1929-30. These volumes have proved to be among the most valuable documents in the office.

WILLIAM S. HOFFMAN,
The Pennsylvania State College

A Study of Transfer Relations among Missouri Colleges

At the St. Louis meeting of the Missouri Association of Collegiate Registrars in November, 1939, a committee was appointed to study the question of the transfer of student credits among the different institutions of higher education in Missouri.

The study revealed that a total of 1849 students transferred from Missouri institutions to one of these 39 institutions during the school year 1939-40. Of these 38 per cent came from junior colleges, 28 per cent from four-year liberal arts colleges, 16 per cent from teachers colleges and 18 per cent from the universities in the state. Thus, approximately two-thirds of the transfers came from the junior colleges and four-year liberal arts colleges, while the remaining one-third was divided about equally between the universities and the teachers colleges.

As would be expected, the junior colleges have the largest number of student transfers to other institutions, for students who finish a two-year college must transfer to some other institution if they complete a four-year college course. Likewise, because of the two-year curriculum, they receive very few transfers. The problem of the junior colleges in connection with this study is transfer relations in sending students to other institutions.

For the four-year colleges the problem becomes one of receiving students. Ten institutions, representing the four universities, the Missouri School of Mines, and the State Teachers Colleges, receive over 80 per cent of the transfers. The problem of transfers in these institutions becomes one of fitting transfer students into the various curriculums offered.

THE MISSOURI COMMITTEE

IN THE OFFICE

DUPLICATING RECORDS—The following institutions report the installation of and successful experiences with the Photostat Junior for duplicating records: South Dakota State College; Mt. Union, Ohio; Marshall, West Virginia; Southwestern, Louisiana; Central State Teachers College, Michigan; and Howard University.

The value of the Dexigraph is attested to by new users at San Francisco State College, the University of Oregon, and the University of Colorado.

Immaculata College, Pennsylvania, has installed a Duostat; Tennessee Polytechnic Institute, a Duophoto; and Luther College, Iowa, a Portagraph.

All of the above equipment is used for duplicating transcripts and records. Information concerning the companies from which they can be obtained and their adaptability to a situation can be obtained from these registrars.

INTERNATIONAL BUSINESS MACHINES EQUIPMENT—Registrar Hill at the University of Louisville ranks students by computing a quality point standing on an I.B.M. card and then ranking them with the I.B.M. sorter.

Registrar Larson at Iowa State Teachers College uses I.B.M. equipment in handling questions of admission cards, final grade cards, and statistical information for reports.

The University of New Hampshire has installed a line of I.B.M. equipment, including a test scoring machine, automatic printing punch, and counting card sorter.

Wayne University has installed an I.B.M. scoring machine and a Hektowriter for duplicating records. The latter is also an I.B.M. product.

FILMING RECORDS—In order to save filing space and money, Registrar Lesher of the University of Arizona is eliminating small enlargements of photographic records and is filing instead film copies of the original. The film is about 1⅛ inches in size and is a section of the 35 mm. film used in copying. After being processed, the film is varnished for protection and the small sections are then filed in individual envelopes. The Eastman safety base high contrast positive motion picture film is used. As the cellulose acetate base of the film has the keeping qualities of high grade rag base paper, these negatives are truly permanent and may be kept indefinitely.

COMPUTING GRADE POINTS—Otterbein College uses an Accuratio, which was devised by a graduate student at Muskingum College and is sold by that institution. It is very valuable for computing grade point averages.

Arkansas Polytechnic College uses a chart which is placed under a glass table top and which contains all possible ratios from 0 to 6 for students carrying a semester hour load of from 6 to 22.

In this issue (p. 214) of the JOURNAL is published an article which contains tables for computing grade point averages. These might be of help to readers.

REPORTED TO US

KENNETH A. BROWNE returned to Hastings College this fall after a two-year leave of absence, during which he completed course and residence requirements for the Ph.D. in education at the University of Pennsylvania, and succeeded P. W. Evans, retired, as registrar. Professor Evans had been on the Hastings faculty since 1918.

Laurence Lange, Director of Admissions, New York University, University Heights, has become Dean of Men at Ohio University.

Dean Alice Hill Byrne of Western College, Ohio, will retire in June, 1941 and will be succeeded by the Dean of Women, A. Helen Tappan.

Mrs. Alice J. Breese is Acting Registrar at Pacific University. Ruth Moore is Registrar at Eastern College of Education, and E. Avard Whitman has become Registrar at Linfield College. All of the aforementioned colleges are in the state of Oregon.

Sister Anastasia Maria has been appointed Registrar of Immaculata College. She was formerly Assistant Registrar.

Registrar L. A. Foust of Washington and Jefferson College has relinquished his office to become Linn Professor of Political Science. S. Ethel Love, formerly Assistant Registrar, became College Recorder, and Thomas M. Finley has become Director of Admissions.

Raymon M. Kistler has been inaugurated President of Beaver College, (Pa.). He came from Central Avenue Presbyterian Church, in Rochester, New York, where he had been pastor for twelve years.

Registrar C. S. Wilkins is on a leave of absence from the John Tarleton Agricultural College to take up active duty as Captain in the Reserve Corps of the United States Army. Gabe Lewis is Acting Registrar during Mr. Wilkins' absence. R. O. Wilson has been appointed Registrar of the Gainesville Junior College, Texas, to succeed the late Gilbert Irwin.

Charlie Neal Young has been appointed Registrar of San Antonio Junior College to succeed Doris Yeargan, who was recently married. Nancy Cooper has succeeded Doris Schow as Assistant Recorder in the Registrar's Office at the University of Texas. Virginia Tabb has also been appointed Assistant Recorder in the same office.

Registrar and Associate Dean D. A. Shirley of the West Texas State Teachers College has been elected President of the Association of Texas

Colleges. He recently retired as the Association's Chairman of the Commission on Co-ordination. He held this office for seven years.

William N. Beetham recently retired as Registrar of Marshall College, West Virginia, and was succeeded by Luther E. Bledsoe, who was formerly Registrar at Kanawha Junior College and Acting Dean of Instruction at Alderson Junior College. For the past five years Mr. Bledsoe has been Director of Student Work and Out-of-School Educational Programs of the National Youth Administration of West Virginia.

Registrar E. F. Sheffield, professor at Sir George Williams College in Montreal, has completed a study of the "Facilities in Canada for the Formal College Education of Employed Adults." Mr. Sheffield is doing considerable work in the study of characteristics of adult students. Copies of the investigation mentioned above can be obtained upon request.

Harold Threlkeld has become Director of Admissions at the University of Denver, and C. Harold McCully has become Assistant in Student Personnel.

Kenneth A. Bernard, Registrar of Boston University, represented the American Association of Collegiate Registrars at the inauguration of Dr. Carl Stephens Ell as President of Northeastern University in Boston. Registrar William S. Hoffman of the Pennsylvania State College represented the Association at the inauguration of Raymon M. Kistler as President of Beaver College.

Assistant Registrar Mary Lou Griswold, of Birmingham-Southern College, is on leave this year, doing graduate work at Northwestern University. She is also serving on the staff of Counselors at Northwestern this year.

Margaret Maple, formerly Alumni Secretary at Pomona College, has become Recorder. Charles Spaulding has been named Registrar at Whittier College.

Dean W. S. W. McLay is retiring after forty-six years on the Faculty of McMaster University as lecturer, professor, and Dean of Arts.

Abbey School, Canon City, Colorado, has changed its name to Holy Cross College. Reverend Thomas Zabolitzky, formerly Registrar, has become Dean of Men, and Reverend Harold Glentzer has been appointed Registrar.

At Mesa College, Grand Junction, Colorado, Marshall C. Miller, formerly Registrar, has been made Dean of Men and M. F. Griffith has succeeded to the office of Registrar.

Alta Glenny has been appointed Assistant Registrar and Assistant Director of the Division of Public Relations at Western State College, Colorado.

Cliff Guild, who was Registrar of Illinois Wesleyan University from 1920 to 1934, has been recently honored with the title of Professor Emeritus.

The following are changes in Kansas: Grace McWilliam succeeds Allen P. Wikgren as Registrar of Ottawa University; Iva Pickering succeeds Beulah Pocock as Registrar of Friends University; and Sister Mary Hilary replaces Sister Ermenhilda as Registrar of Sacred Heart Junior College.

James K. Hitt, alumnus of the University of Kansas, has been appointed Assistant Registrar at that institution. He was formerly a teacher of mathematics at the Dodge City Junior College and at the University of Wichita.

Frank K. Burgess, who has been Assistant Registrar at Union College since 1935, has been promoted to Registrar. Previous to this time the office of Registrar has been administered in conjunction with the office of Dean.

George Brennan, Recorder in charge of records and registration at Wayne University, is on leave of absence for graduate study at Northwestern University. Doris A. Cline is Counselor in charge of the Records Office during his absence.

Many of the old registrars will regret to learn of the death of Dr. Orrin Leslie Elliott, who was the first Registrar for Stanford University and who served continuously until 1925, when he was made Registrar Emeritus. He celebrated his eightieth birthday in March and passed away among his many friends on the Stanford campus on August 28, 1940.

Dean A. Samuel Wallgren, who was well known to many registrars in the Middle West, died on August 6, 1940. He was Registrar at North Park College and Academy from 1912 to 1937, and Dean from 1918 until the time of his death. He was a former President of the Illinois Association of College Registrars.

Registrar Elvin J. Norton of the University of Utah passed away on November 7 after eighteen years of service as recorder of the faculty, secretary, and registrar. Mr. Norton's eyesight began failing him several years ago, but notwithstanding this handicap, he continued his administrative duties up to within the time of his entrance to the hospital for an appendectomy. Due to his perseverance and determination, along with his other duties, he learned the Braille System for the blind and kept in touch with many current matters which otherwise would have been denied him. He was host at the fourth annual meeting of the Association of American Collegiate Registrars, held in Salt Lake City, during July, 1913.

BEGINNING with the fall semester of 1940, Birmingham-Southern College launched its new program of intramural sports for all students to replace the program of intercollegiate sports previously followed. Students and faculty have entered into the new program with enthusiasm which far surpassed the fondest hopes of the administration and trustees when the decision was made to discontinue intercollegiate athletics and substitute a broad program of intramural sports. This new program will receive added impetus upon completion of the new $100,000 Physical Education Building which is now under construction, and which it is hoped will be available for use at the beginning of the second semester of the current year.

The University of Denver reports the following gifts: $251,000 to the Building Fund; $59,000 to the Alfred P. Sloan Foundation for 1939-40; $30,000 to the Scholarship Fund, School of Law; $2,000 to the Hannington Memorial Loan Fund.

The Texas A. and M. College now offers curriculums in industrial and aeronautical engineering. This is the first year that these have become separate programs.

The Department of Speech of the Mississippi State College for Women is this year occupying a new building completely equipped for all phases of dramatics and speech work. It contains a broadcasting studio, audience room, recording devices, private practice rooms, and workships for the construction of scenery, in addition to the regular classrooms and offices.

Through gifts, the University of Kansas City is now erecting a $250,000 gymnasium and health center and a new science building to cost an equal amount. With the gift for the gymnasium also went an amount sufficient to provide adequate up-keep.

It is interesting to note that the relationship with the Latin American countries has extended itself in a curriculum in Latin American Relations at the University of New Mexico.

New Mexico Institute is planning its fiftieth anniversary, to be celebrated at the 1943 Commencement. A $400,000 building program now under way will be completed by the fiftieth anniversary. Under construction are an administration-library building, and a new academic building. Upon the completion of these two, the present high school academic building will be demolished, and on its site additional barracks constructed. In addition to the buildings mentioned, a new auditorium will be built, replacing the one now in use which adjoins the present high school academic building.

Gifts totalling $230,000 have already been received to build and equip a new college library building for Bucknell University. Work will not start

until the total needed, $350,000, has been pledged. Plans are being prepared so that when the amount is complete, work can proceed without delay.

Bucknell's new engineering building is now in use. The old building was completely renovated and a large wing constructed which nearly tripled its former size. For the first time in many years all engineering classes now meet under one roof. The new wing, renovations, and equipment have involved the expenditure of nearly $300,000.

On October 9 President Roosevelt approved appropriations of $60,500,000 to be distributed by the Office of Education for vocational education, and of $32,500,000 to the National Youth Administration for its work projects.

On October 3 Congressman P. L. Schwert of New York introduced in the House of Representatives (H. R. 10606) the "National Preparedness Act of 1940 for Health Education, Physical Education, and Recreation in Schools and School Camps." Its primary purpose is "to assist in making adequate provisions for health education, physical education, and recreation in schools and school camps . . . without federal control over educational policies of states and localities." For the first fiscal year ending June 30, 1941, $50,000,000 would be appropriated. This would increase $10,000,000 a year until 1946, after which $100,000,000 would be provided annually.

On November 19 Senator Wagner introduced an amendment to S. 4269. The amendment, specifically and without reservation, exempts from coverage from the Social Security Act all public employees already protected by pension plans under state, county, or municipal auspices. In its exact wording the amendment would exempt all "Service performed in the employ of a state, or any political subdivision thereof, or any instrumentality of any one or more of the foregoing which is wholly owned by one or more states or political subdivisions, or any instrumentality or authority created and existing by virtue of legislative acts of two or more states, where the employee performing such service is a beneficiary, or a contributing member, or has an unrealized interest in, or is designated as a future beneficiary by the rules of any pension, relief, or retirement fund, established and maintained by authority of the constitution or statutes of a state, provision of a municipal charter, or ordinance of a municipality or other political subdivision. *Provided* that such persons as are separated from said service without pension, retirement, or compensation award shall not thereafter be affected by the provisions of this paragraph."

Under the terms of the Convention for the Promotion of Inter-American Cultural Relations the United States has now arranged exchanges of students and professors with nine of the American republics. Ten graduate students from the other American republics have been selected for study in

the United States and four additional students will soon be chosen. Eight graduate students and three professors from the United States have been invited to study and teach in other American countries. These arrangements have been made between the United States and the Governments of Chile, Costa Rica, the Dominican Republic, Guatemala, Haiti, Nicaragua, Panama, Paraguay and Venezuela. In addition the United States has been informed that the Governments of Brazil and Peru will undertake similar arrangements in the near future. Plans for these exchanges have been worked out jointly by the Department of State and the Office of Education of the Federal Security Agency.

The Editor expresses regret for the error on page 74 of the October number of the JOURNAL. "The Department of Business in the University of Florida" should read, "The Department of Business in John B. Stetson University."

The College of Mines and Engineering of the University of Arizona has been reorganized into two colleges—the College of Engineering, which includes the departments of Civil, Mechanical, and Electrical Engineering, and the College of Mines, which includes the departments of Geology and Mineralogy, and Mining Engineering and Metallurgy, together with the Arizona State Bureau of Mines. The College of Mines and the Bureau of Mines are housed in a new building provided through the generosity of the Phelps Dodge Corporation as a memorial to Dr. James Douglas, pioneer leader in mining development in Arizona and founder of the Phelps Dodge Corporation.

The Trustees of Armour Institute of Technology and of Lewis Institute announce the consolidation of these institutions to form Illinois Institute of Technology, having as its divisions—Armour College of Engineering, Lewis Institute of Arts and Sciences, the Graduate School, and Armour Research Foundation.

Blackburn College in Illinois has been presented with a music set, consisting of 600 records and a phonograph, by the Carnegie Corporation.

Worcester Polytechnic Institute has dedicated Alden Memorial, which contains a beautiful auditorium with a seating capacity of about 900, the general library of the Institute, social rooms for the use of student organizations, and other groups. The auditorium has a well-equipped, modern stage, and is equipped with motion picture and sound projectors. It is also designed for use as a ball room.

CONCORDIA COLLEGE, Minnesota, will observe the fiftieth anniversary of its founding during the school year 1941-42.

Washington University in Missouri is celebrating the twenty-fifth anniversary of the School of Medicine and is commemorating the beginning of the present "Medical Center."

Fordham University, the first Catholic college and university in New York, begins its one hundredth year when classes open next month, marking a century of achievement of Catholic higher education in the Archdiocese. In the intervening five generations, Fordham has grown from a little group of six students who came to study in the Rose Hill manor house in 1841 to a university of more than eight thousand students, with eight different schools occupying thirteen buildings on the seventy-acre campus and three entire floors in the Woolworth Building in lower New York.

The College of Idaho will celebrate its fiftieth anniversary in the spring of 1941.

Fisk University, established "for the education and training of young men and women irrespective of color," will celebrate from April 29 through May 4 the seventy-fifth anniversary of its founding.

The University of Kansas is planning the seventy-fifth anniversary of its founding in conjunction with the 1941 commencement exercises.

Illinois Wesleyan University is celebrating its ninetieth anniversary and making extensive plans looking toward the celebration of the centennial in 1950.

On October 26, 1940, Washington and Jefferson College celebrated its annual Founders' Day by dedicating a five-hundred-thousand dollar addition to the campus. The addition includes a new Lazear Chemistry Building, and a remodeled McIlvaine Biology Building and Reed Dormitory.

Temple University will hold its Seventh Annual Career Conference for Secondary School Students on March 21 and 22. The Conference this year will include a section for counselors and college registrars for discussion of problems incidental to transferring from high school to college and a symposium for parents who wish to discuss with experienced persons problems of their children. There will be conferences in thirty-two fields for secondary school students. On the program will be Robert K. Burns of the Science Research Association, Dean C. Maxwell McConn of New York

University, and Louis Q. Moss of the Philadelphia Naval Apprentice School.

Regional and State Meetings

The Association of *Arkansas Registrars* held its annual meeting on November 8, 1940, at the Little Rock Junior College.

The following topics were discussed: "Admissions," "Orientation Problems," and "Permanent Records."

Officers for the ensuing year are: Mr. H. E. Eldridge, of Arkansas State College, president; Mr. G. Y. Short, of Arkansas State Teachers' College, vice-president; and Mrs. Clarine Snow Longstreth, of Little Rock Junior College, secretary.

(MRS.) CLARINE SNOW LONGSTRETH

The first meeting of *The Chicago Conference of Registrars,* for the year 1940-41, was held in De Paul University's Moot Court Room on Wednesday, November 27, with thirty-five persons in attendance.

The program, as arranged by the Program Committee—Mr. Enock C. Dyrness and Sister Mary Fidelis, was as follows:

"Certificate Requirements for Teachers in Chicago Public Schools," by Mr. Paul G. Edwards of the Board of Examiners, Chicago Board of Education.

"A Report on the Civilian Pilot Training Program of the Civil Aeronautics Authority in Chicago Area Colleges," by Miss Marie Meloy, Registrar, Lake Forest College.

"The Application of Medical, Nursing, and Other Professional School Credits on a Liberal Arts Program," by Mr. B. J. Steggert, Registrar, Loyola University.

Announcements concerning the 1941 AACR Convention were made by Mr. E. C. Miller, Registrar of the University of Chicago, and Chairman of the Committee on Local Arrangements for this Convention, which is to be held in the Drake Hotel, Chicago, April 15-17.

The officers for the year 1940-41 elected at the May meeting of the Conference were: president, Mr. J. A. Humphreys, Registrar and Director of Personnel, Wilson Junior College; vice-president, Miss Valerie Wickhem, Director of Admissions, the University of Chicago; secretary, Miss Marie Meloy, Registrar, Lake Forest College.

MARIE MELOY

The annual meeting of the *Colorado-Wyoming Association of Registrars* was held at Colorado College, Colorado Springs, on November 6 and 7, 1940.

The following papers of general interest were presented: "American Higher Education and the Present Crisis," by Father Thomas Zabolitzky of Holy Cross College, Canon City; and "The Value of a Pre-College Guidance Program," by the Rev. John J. Flanagan, of Regis College.

Some of the topics for general discussion were: 1. Providing routine information for faculty and students; 2. Practice and procedure in furnishing scholarship averages to scholarship societies; 3. Extent and manner in which information concerning prospective students be given to fraternities; 4. Junior college curriculum suggestions submitted by four-year colleges; 5. Terminal courses and their credit value; 6. Transfer of junior college credits to the senior colleges.

It was decided to have future meetings of two days' duration, next year's meeting to be held at the University of Denver.

The following officers were elected for the coming year: president, Mr. R. M. Carson, Colorado State College of Education; vice-president, Mrs. M. E. Thamer, Colorado Woman's College; secretary-treasurer, Marjorie M. Cutter, University of Denver.

M. ELIZABETH THAMER

Association of Indiana College Registrars: A meeting called by Mrs. Ruth Deming, Acting Registrar of Butler University, Indianapolis, was held at Butler University, October 26, 1939, for the purpose of discussing the advisability of organizing a regional association of Indiana registrars. Registrars from ten institutions were in attendance.

Extended discussion showed the unanimous belief of those present that such an organization could be made very helpful and should be formed. Thomas A. Cookson was elected chairman and Mrs. Ruth Deming secretary, with instructions to hold a meeting at Indiana University in the spring of 1940.

A meeting was held at Indiana University, March 29, 1940, with thirty-nine present from nineteen schools. The program consisted of a business session in the morning, a luncheon, and an afternoon session devoted to a discussion of procedures and common problems of registrars. It was agreed that the annual meeting of the organization shall be held in the fall of each year, and the invitation of Purdue University to meet there in the fall of 1940 was accepted. A committee was appointed to draft a constitution.

A meeting was held at Purdue University, November 7, 1940, with sixty-five present from twenty-seven schools.

A constitution was adopted which gives the organization the name, *Association of Indiana College Registrars,* and makes all recognized institutions of higher education in Indiana eligible to membership. Thomas A. Cookson, of Indiana University, was elected president, and Mrs. Ruth

Deming, of Butler University, secretary-treasurer for the ensuing year. The invitation of Indiana State Teachers College, of Terre Haute, to the Association to meet there next fall was accepted. President Edward C. Elliott, of Purdue University, gave a short address at the luncheon meeting. The afternoon session, devoted chiefly to questions and answers, was featured by an address by Professor H. H. Remmers, of the Division of Educational Reference at Purdue, on some possible guidance uses of the High School Testing Service for Indiana.

THOMAS A. COOKSON

The *Kansas Association of Collegiate Registrars* held its eighteenth annual meeting at Mount Saint Scholastica College, Atchison, Kansas, on October 19, with Miss Estelle Dougherty, Sterling College, President, presiding. Doctor Leslie G. Whitcomb, President of the College of Emporia, addressed the joint session of the registrars and Kansas college deans, and Dr. U. G. Mitchell, Chairman of the Department of Mathematics of the University of Kansas, reported on the results of the Kansas Mathematics Test No. 1. Miss Dougherty, Mr. Stanlee B. Dalton of the Fort Hays Kansas State College, and Mr. P. J. Wedel of Bethel College, North Newton, reviewed the 1940 meeting of the American Association of Collegiate Registrars. Miss Jessie McDowell Machir, Kansas State College, Manhattan, presented the paper, "Evaluation of Transcripts." Miss Gladys Phinney, Washburn College, Topeka, was the leader in a Round Table on Scholarship Probation, and was assisted by Mr. A. H. King, Kansas Wesleyan University, Salina, Miss Clara L. Johanning, Baker University, Baldwin, and Mr. Stanlee B. Dalton. "In the Registrar's Workshop," an open forum for discussion of questions submitted by the registrars, completed the program.

Bethel College was chosen for the 1941 meeting of the Association. The officers for next year are as follows: president, Miss Gladys Phinney, Washburn College, Topeka; vice-president, Stanlee B. Dalton, Fort Hays Kansas State College, Hays; secretary, Sister Ann Elizabeth, The Saint Mary College, Leavenworth; treasurer, Miss Mary Kimball, Kansas State College, Manhattan.

SISTER ANN ELIZABETH

The *Association of Kentucky Registrars* held its annual meeting on October 26, 1940 at the University of Kentucky, with the President, Mr. C. R. Wimmer, Dean, Union College, presiding.

The theme of the conference was "Using Materials Compiled by the Registrar to Improve College Instruction." Mr. V. F. Payne, of Transylvania College, discussed the theme, "In the Private Liberal Arts College"; Mr. Ralph E. Hill, of the University of Louisville, "In the University";

Mr. M. E. Mattox, of Eastern Kentucky State Teachers College, "In the State Teachers College"; and Dean A. A. Page, Pikeville College, "In the Junior College."

Mrs. Cleo Gillis Hester, Registrar, Murray State Teachers College, gave a report on the St. Louis meeting of the American Association of Collegiate Registrars.

Miss Jessie Wilson, secretary of the Association, gave a paper entitled, "A History of the Association of Kentucky Registrars and the Institute for Registrars."

The following officers were elected: president, Miss Adelaide Gundlach, Berea College; vice-president, Mrs. Clara Mikkelson, Asbury College; secretary-treasurer, Miss Jessie Wilson, University of Kentucky.

JESSIE WILSON

The tenth annual meeting of the *Middle States Association of Collegiate Registrars* was held on November 23, 1940, at Haddon Hall, Atlantic City, New Jersey, with Miss Rebecca C. Tansil, of State Teachers College, Towson, Maryland, presiding. There were sixty-six registrants present and fifty-seven institutions of higher learning were represented. A breakfast business session was followed by a most interesting panel discussion of registrars' problems in relation to the total situation of the student, under the leadership of F. Taylor Jones, of Drew University, Madison, New Jersey, with the assistance of Miss Ruth S. Harley, of Adelphi College, Garden City, New York, Miss Emma E. Deters, of the University of Buffalo, Buffalo, New York, Thomas A. Reilly, of Fordham University, New York City, and Mr. Franklin T. Sheeder, of Ursinus College, Collegeville, Pennsylvania, and several speakers from the floor. Some of the questions considered were: (1) How can the individual student's total problem be known and brought into view so that he will be fairly treated when his academic standing is questioned by the faculty? (2) How far is it practicable to carry the cumulative record idea in college? (3) How can you get at the reasons for low marks, and use the information in a way that will benefit the student? (4) Is it possible to predict the level of performance an individual student should reach? On what basis? Is it feasible to hold him to account at this level, rather than at a general class or college level?

A recess for luncheon, at which Mrs. Willard M. Hillegeist and Dr. and Mrs. Wilford M. Aiken were guests, was followed by the afternoon session, at which resolutions were adopted by a rising vote in regard to Allan Bright and Willard M. Hillegeist, whose vital contributions to the work of the Association were terminated by death during the past year. The program for the afternoon dealt entirely with admissions. Miss Irene M. Davis, of the Johns Hopkins University, reported on the work of the

Committee on a Uniform College Admission Blank; Dr. William R. Howell, of Washington College, Chestertown, Maryland, gave an address on "Some Problems of Admission to the Small College"; and Dr. Wilford M. Aikin, Chairman of the Progressive Education Association Commission on the Relation of School and College, gave a challenging report of the Commission's eight-year study of the Progressive Education Association's experiment in freeing thirty representative high schools from entrance prescriptions for their college candidates.

Officers elected for the ensuing year were: president, Fred E. Nessell, the George Washington University, Washington, D.C.; vice-president, Emma E. Deters, University of Buffalo, Buffalo, New York; secretary-treasurer, Mrs. Hazel C. Quantin, the Packer Collegiate Institute, Brooklyn, New York.

HAZEL C. QUANTIN

The annual meeting of the *Minnesota-Dakota Association of College Registrars* was held at the College of Saint Catherine, Saint Paul, Minnesota, November 8. There were sixty-eight members and guests in attendance, representing thirty-nine institutions. It was voted to change the name of the organization to the North Central Association of College Registrars and to invite registrars in Iowa to membership. The reorganization grew out of interest in the Association expressed by Iowa registrars during the past year. The Association now includes registrars in the four neighboring states, Minnesota, North Dakota, South Dakota, and Iowa. The Association has, for some years, contributed $25 toward the expense of a delegate to the National Convention. It was voted to increase the expense contribution to a maximum of $50 with the provision that the retiring president shall be the delegate with power to appoint an alternate if he cannot attend or if his expenses are already provided by his own institution. It was also provided that a second delegate be sent when and if the income of the Association permits.

The program included:

Address of Welcome—Mother Eucharista, College of Saint Catherine
Convention Highlights—Mr. D. B. Doner, South Dakota State College
The North Central Association's Educational Temperatures—Mr. H. W. Frankenfeld, University of South Dakota
The Registrar's Part in the Personnel Program—Sister Mary Keating, College of Saint Teresa
Methods of Reproduction of Records for Transcript Purposes—Mr. Charles R. Maruth, University of Iowa
Luncheon and tour of Saint Catherine Campus
What Should Be Included in the Application for Admission to College—Mr. R. M. West, University of Minnesota
Schedule Making and Subject Conflicts as Applied to Smaller Teachers Colleges—Mr. C. O. Mehuse, Mayville State Teachers College
Questions for Discussion—Mrs. Clara Koenig, University of Minnesota

Rev. A. E. Luger, College of St. Thomas, St. Paul, Minnesota, distributed enrolment reports from member institutions which indicated for colleges in this area an increase of 1.1 per cent in number of students over last year.

The Association each year mimeographs papers presented at the annual meeting. A few extra copies are available for distribution upon request.

The following officers were elected for the ensuing year: president, H. W. Frankenfeld, University of South Dakota, Vermillion, South Dakota; vice-president, Sister Mary Keating, College of St. Teresa, Winona, Minnesota; secretary-treasurer, A. H. Parrott, North Dakota Agricultural College, Fargo, North Dakota.

T. E. PETTENGILL

The annual meeting of the *Missouri Association of Collegiate Registrars* was held at the University of Kansas City on November 6, 7, and 8. A number of pertinent questions submitted by members of the Association were discussed from the practical standpoint. A report compiled during the past year on the subject "Transfer Relations among Missouri Colleges" was submitted to each member. The following officers were elected for the coming year: H. H. Armsby, Missouri School of Mines, President; J. Robert Sala, Christian College, Secretary.

C. E. EVANS

The seventeenth annual meeting of the *North Carolina Association of Collegiate Registrars* was held at the Washington Duke Hotel, Durham, North Carolina, on November 6, 1940.

Mr. W. L. Mayer, of North Carolina State College, gave a report of the 1940 meeting of the American Association of Collegiate Registrars. The remainder of the program was devoted to round table discussions on the following subjects: "Transcripts and Records to be Filed with the State Department," led by Mrs. M. R. Terrell of the North Carolina State Department of Public Instruction; "Problems Relating to All Students," led by Mr. H. J. Herring of Duke University; "Problems Relating to Transfer Students," led by Dr. H. J. McGinnis, East Carolina Teachers College; and "Problems Relating to Freshmen," led by Miss Mary Taylor Moore of the Women's College of the University of North Carolina.

The following officers were elected for the coming year: president, W. L. Mayer, North Carolina State College, Raleigh; vice-president, Perry Case, Atlantic Christian College, Wilson; secretary-treasurer, Hazel Morrison, Flora Macdonald College, Red Springs.

HAZEL MORRISON

The fifteenth annual meeting of the *Association of Ohio College Registrars* was held on the campus of the University of Dayton on November

7 and 8. Thirty-one of the thirty-nine member institutions were represented, and a total of sixty-three persons registered at the meeting.

The program included the following addresses and activities: "Some Educational Problems at the College Level in Ohio," Dr. Walter L. Collins, Director, Division of Instruction, State Department of Education; "Citizenship and Higher Education," Dr. Waymond Walters, President, University of Cincinnati; four "Professional Workshop" discussion groups, in which common problems were deliberated; "Fundamental Standards in Education," Rev. Dr. John A. Elbert, S.M., President, University of Dayton; "As a Teacher Thinketh, So Is He," Dr. Daniel Leary, Associate Dean, Division of Education, University of Dayton; "Education's Mess of Pottage," W. C. Smyser, Registrar, Miami University; "My Visit to the Hawaiian Islands," Rev. George J. Renneker, S.M., Dean and Registrar, University of Dayton; and "The Place of a Registrar in a College Counseling Program," Dr. C. Gilbert Wrenn, Professor of Educational Psychology, College of Education, University of Minnesota. The annual dinner was held at the Miami Hotel, and other sessions of the meeting in the Library of the University of Dayton.

Miss Carrie E. McKnight, Registrar, Muskingum College, was advanced from the post of vice-president to that of president, and Rev. George J. Renneker of the University of Dayton was elected vice-president for the coming year. Lawrence C. Underwood of Hiram College enters upon the final year of a three-year term as secretary-treasurer. The retiring president, C. D. Perry of Bowling Green State University, becomes a member of the executive committee.

LAWRENCE C. UNDERWOOD

The fifteenth annual convention of the *Pacific Coast Association of Collegiate Registrars* met on November 10, 11 and 12 with the University of Oregon and Oregon State College as joint hosts.

The convention opened Sunday evening with an informal reception at the Eugene Hotel. On Monday morning, the session was officially opened by Miss Ellen L. Deering, First Vice-President of the Association and acting President. At this session, D. M. Goode presented a paper on "The Catalog and Curriculum." The group was then taken sixty miles up into the Cascade Mountains for a "Play-Day" and luncheon on the McKenzie River.

Following the luncheon, a panel discussion on "Trends and Techniques" was held. At the evening session in Eugene R. M. West, Registrar, University of Minnesota, spoke on "The Story of an Attempt to Simplify Registration." Tuesday morning a paper on the "Evaluation of Canadian Credentials" was given, following which the entire convention group

drove to Corvallis and Oregon State College for luncheon. The afternoon session was given over to a short business meeting and a paper by E. A. Stebbins on "Military Service and Related Problems." The group then adjourned to the Registrar's Office at Oregon State College where a representative of the International Business Machines Corporation demonstrated several pieces of equipment as aids in registration.

The group then returned to Eugene for an informal dinnner at which C. D. Byrne, the secretary of the Oregon State Board of Higher Education, gave the principal address on "Progress in Unified Control of Higher Education in Oregon." About eighty persons were present at this convention, and the opinion expressed was that it was one of the most successful meetings of the Association. The group will meet in November, 1941, at Santa Barbara, California.

Officers for next year are: president, Miss Ellen L. Deering, College of the Pacific, Stockton, California; first vice-president, E. L. Rea, Riverside Junior College, Riverside, California; secretary, Guy West, Chico State College, Chico, California; treasurer, Clifford L. Constance, University of Oregon, Eugene, Oregon.

EVA BLACKWELL

The thirteenth annual meeting of the *South Carolina Association of Collegiate Registrars* was held at Coker College, Hartsville, South Carolina, on November 29, and was attended by thirty representatives from seventeen colleges.

Dr. Sylvester Green, President of Coker College, gave the address of welcome which was responded to by G. E. Metz, Registrar of Clemson College.

The following papers were presented during the morning session: "Report on Freshman Testing Program," by Lt. Col. L. A. Prouty, Registrar of The Citadel; "The North Carolina Testing Program," by S. W. J. Welch, Assistant Dean of Students, University of North Carolina, and "Some Legal Problems of the College Registrar," by Carlisle Roberts, Professor of Law, University of South Carolina. During the afternoon session two other papers were presented: "High School Records," by Mrs. Louise Y. Earle, Assistant Superintendent of Sumter City Schools, and "What Should be Done About Reports to High Schools," by W. C. Herbert, Registrar of Wofford College.

The following officers were elected for the coming year: president, John G. Kelly, Winthrop College; vice-president, Robert C. Brownlee, Erskine College; secretary, Dora Harrington, Winthrop College; treasurer, Eula Barton, Furman University Woman's College.

DORA HARRINGTON

The twentieth convention of the *Texas Association of Collegiate Registrars* was held at the Roosevelt Hotel in Waco, Texas, on October 25-26, 1940.

Fifty-three individuals representing thirty-eight different colleges in Texas attended the convention. During the first session two interesting and helpful papers were presented. The first, presented by Dean E. N. Jones of Baylor University, was on "Texas Standards." The second paper was presented by Dean George M. Crutsinger of Hardin Junior College on "Needs, Possibilities, and Trends toward Trade and Technical Schools." Mr. E. J. Howell of Texas A. & M. reported on the St. Louis meeting of the American Association of Collegiate Registrars.

Mr. Lynn W. Landrum, columnist on the *Dallas News,* was guest speaker at the banquet session and gave a very fine address on "World Citizenship for Provincial Uncle Sam." An unusual feature of the evening meeting was a session of the "Add and Drop College," which was presided over by Miss Pearl Neas of Southwestern University and Miss Iris Graham of McMurry College. An open forum under the direction of Mr. Francis W. Emerson of the Texas State College for Women featured the Saturday morning session.

The officers elected for next year are as follows: president, Max Fichtenbaum, The University of Texas; vice president, H. V. Robinson, Lon Morris College; secretary-treasurer, Ailese Parten, Mary Hardin Baylor College.

The annual meeting of the Utah Association of Collegiate Registrars was held at Weber College, Ogden, Utah, on October 12, 1940. Henry A. Dixon, President of Weber College, gave an interesting talk on the Trend of Vocational Education in Junior Colleges. This was followed by a round table discussion of Records and Credit Value of work done by students enrolled in order to participate in the program for defense of the national government.

The following officers were elected: president, Matthew Bentley, Dixie Junior College, St. George, Utah; Reed Schwendiman, Utah State Agricultural College, Logan, Utah.

SISTER M. FRANCES INEZ

The *Educational Records Bureau and affiliated organizations* held their ninth annual conference at the Hotel Biltmore, New York City, October 31 and November 1, 1940. Opening the conference with an address on "Education and National Defense," Floyd W. Reeves, member of the Advisory Commission to the Council on National Defense, contended that so far as possible the curricula of schools and colleges should be pointed toward preparation for types of jobs that are in fact available. Kenneth Holland, of the American Youth Commission, presented an interesting paper on the development of and present status of work camps. Mr. Hol-

land emphasized the fact that work experience on projects of public significance is something that young people seldom experience, yet realistic training that has some relationship to classroom experience is needed for effective citizenship.

President J. Edgar Park, of Wheaton College, spoke at the Thursday luncheon meeting on "Catching up on history." His timely remarks pointed to the need of helping the present generation of young people to realize that *effort* is as important as *interest* in individual growth for democratic living. "Three mottoes," said he, "should be incorporated into the life of every school and college: (1) We train you to give (2) Our path is steep, and (3) We act though free to act."

At the Thursday afternoon session, Superintendent Carroll R. Reed, of Minneapolis, Minn., discussed the need for and nature of the National Teacher Examinations. Mary A. May, of the Yale Institute of Human Relations, was the dinner speaker on the theme "Education in an Anxious World."

Dr. George Crile, of Cleveland, Ohio, reported to the conference on his study of certain glandular and other vital organs in some three thousand animals from various parts of the world. It is Dr. Crile's belief that a "Neuro-Endocrine Formula for Civilized Man" may be developed. Dr. Arlie V. Bock, of Harvard University, reported on the Grant Study which is undertaking to follow seventy-five freshmen through their experiences at Harvard and in later years to discover what contributes most toward the playing of effective roles in life. It is hoped that a psychology of normal persons will be one of the outcomes of this study.

George D. Stoddard gave a supplementary report on his much publicized research project on "The Growth and Decline of Intelligence" which has been in progress for some years at the University of Iowa. Additional data tend to support the original conclusions of the study, according to Dr. Stoddard.

President Dixon Ryan Fox, of Union College, addressed the conference at the Friday luncheon meeting on the subject "The Independent College and School—Their Necessity." President Fox made a strong plea for more generous support on the part of capital of the private school and college because of their contributions to education and social progress in the past as well as their future possibilities for continuing to make contributions.

The final session of the conference was devoted to an evaluation of the eight-year study of the Progressive Education Association. Burton P. Fowler, of the Tower Hill School, and Harold E. B. Speight, of the University of the State of New York, were the closing speakers.

FRANKLIN I. SHEEDER

THE LEGAL REPORTER

For some time a group of contributors, including professors of education, law, political science, and officers of state and local school systems, have reviewed the decisions of higher courts that affect schools for the preceding year in the yearbook of school law. There are between three to four hundred decisions included in the current issue[1] and these are classified into seventeen divisions. Each section contains a general summary followed by a review of specific cases to indicate the trends in the law toward education.

There are two chapters devoted to decisions affecting institutions of higher education. The remaining sections deal largely with common schools and school districts.

The title of Chapter I is "The Rights of Pupils and Parents." The principal sections deal with 1. saluting the flag as a condition of school attendance; 2. vaccination; 3. tuition of non-resident students; 4. transportation; 5. injuries; 6. scholarships.

In Chapter II there is a review of cases affecting certification, appointment, contracts, salaries, race discrimination, leaves of absence, and dismissals.

Chapter III covers tenure, and Chapter IV deals with retirement, pensions and workmen's compensation. Teachers' retirement in New York City is discussed in the next chapter, and local school officers, their election, qualification, removal and compensation in Chapter VI. Section VII reviews cases dealing with the local school corporation, and Chapter VIII with the acquisition and management of school property. This chapter is of interest to colleges and universities, in that two decisions involve self-liquidating plans for financing erection of school buildings and joint use of school property by a public and a private junior college.

In Chapter IX, on "Federal Aid for Educational Projects," one decision concerns higher education as it involves rentals for office space in college buildings constructed with federal aid. Chapter X deals with "School Contracts Other than for Teaching" and Chapter XI with "The Tort Liability of School Districts and School Personnel." "School District Indebtedness," "Taxation for Public Education," "Creation and Alteration of School Districts," and "State School Administration" furnish the topics for the other chapters.

The first of the two sections of particular interest to higher education concerns state and municipal institutions. The case of *Moore V. Bell* (Ga.),

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[1] Chambers, M. M., *The Eighth Yearbook of School Law,* Washington, D.C.: American Council on Education, 1940, pp. viii, 185, $1.50 and $1.00.

198 S. E. 711 (1938), involved the matter of appointment by the governor of a member of the board of regents. A law passed in 1938 by the Georgia legislature stated that appointments to all boards since January 1, 1937, not submitted or confirmed by the State Senate since January 1, 1937, shall automatically cease and it shall be the duty of the governor to fill the vacancy by appointment. The governor attempted to include the appointment of a member of the board of regents under this provision even though the incumbent to be replaced had been duly appointed in 1935 for a six-year term. The court pointed out that the purpose of the act was to perfect an appointment of the governor by requiring senatorial confirmation and was not to invalidate an appointment already perfected by the senate's confirmation. Therefore, the previous appointee was entitled to retain office.

Concerning tenure, it is evidently within the power of an institutional governing board to adopt by-laws relating to tenure of its instructors and employees. This is an administrative function, and needs no legislative authorization. Such rules have the force of law, i.e., they have the same effect as if they were enacted by the legislature, and the board cannot suspend or annul such rules in violation of contract rights acquired thereunder. Two cases dealt with this situation, *State ex rel. Keeney V. Ayers, Governor et al.* (Mont.), 92 P. (2nd) 306 (1939) and *Ironside V. Tead et al.,* (N.Y. Misc.), 13 N.Y.S. (2nd) 17 (1939). Both decisions affecting tenure were in favor of the college instructors concerned.

Two decisions dealt with self-liquidating building projects: *State College Development Ass'n. V. Nissen, Sec. of Board of Regents,* 281 N.W. 907 (1939) and *Brown V. Sikes et al.,* (S.C.), 198 S.E. 854 (1938). Thus the extensive powers given to the Board of Regents in South Dakota include sufficient authorization for the board to construct dormitories at the State College; specific authorization of construction by the legislature is unnecessary.

The South Carolina case involved the building of barracks at Clemson College. The board had authority to obtain a loan not exceeding $350,000 for buildings. The board was not compelled to make the loan in its entirety, but could borrow in installments, whenever necessary, as long as the aggregate amount did not exceed the authorized maximum.

The above decisions, together with *Keller V. State Board of Education of Alabama* (Ala.), 183 So. 268 (1938), also involved loan agreements to finance building projects. It is evidently well established that the word "debt" within the meaning of constitutional prohibitions does not include an obligation which is to be repaid solely out of a special fund. Only if the state is obligated directly, or indirectly, to feed the special fund from its general funds, may legal objections be invoked.

The case of *Gardner V. State,* 256 App. Div. 385, 10 N.Y.S. 274

(1939) involved an injury to an eleven-year-old child in a state normal school gym class. Claim for damage was approved on the basis that the child was not given proper care and supervision.

The second chapter, involving higher education, reviews cases dealing with colleges and universities under private control. The decision in *Synod of Mississippi et al. V. Southwestern et al.,* (Tenn.) 122 S.W. (2nd) 443 (Dec. 17, 1938) concerned the selection of directors of the College Corporation, in which the charter provisions of appointment were upheld.

In the case of *In re Patterson's Estate: Appeal of Schrack, et al.,* (Pa.), 3 A. (2nd) 320 (1939) the dispute concerned a trust fund at Ursinus College. The heirs sued to obtain the fund on the ground that the college was not carrying out the testator's intent. A judgment in favor of the college was affirmed.

The decision in *City of New Orleans V. Administrators of Tulane Educational Fund,* (La.), 190, So. 560 (1939) concerned sale to the city of land earlier transferred to Tulane by the State. Since the legislative act authorized the leasing, sale or disposition of the property, the court held that this was a continuing authorization which could be exercised at any time and upon any part of the property.

One decision, *District of Columbia V. Mt. Vernon Seminary,* 69 App. D.C. 251, 100 F. (2nd) 116 (October 10, 1938) dealt with tax exemption. This private school had paid property taxes to the District of Columbia under protest, subsequently sued and recovered the amount paid.

In *Vanderbilt University V. Henderson* (Tenn. App.), 127, S.W. (2nd) 284 (1938) a patient in the University hospital sued to recover damages due to injury received through negligence of the servants of the hospital. By the reasoning of the court "a charitable institution is liable for a tort of its agent and may be pursued to judgment, but the institution's trust property cannot be taken to satisfy such judgment, and where such institution has liability insurance, such insurance is not trust property of the institution and may be appropriated to the satisfaction of such judgment." The court went on to say that Tennessee repudiates the doctrine that one who is receiving a service from a charitable institution impliedly waives any right to damages for its negligence.

In the suit of *In re Jennings' Estate,* (Pa.), 198 A. 621 (April 18, 1938) fraternity houses are defined as multiple dwellings.

The bulletin concludes with an appendix that deals with "Public Aid for Private and Sectarian Schools," "Federal Taxation of Public School Activities," a detailed review of twenty-three recent graduate theses in school law leading to the doctor's degree, and a list of seventeen theses that have been written in fulfillment of the requirements for the master's degree.

A. H. LARSON

IN THE JOURNALS

"Music Education in Higher Institutions," Riemenschneider, Albert, *The North Central Association Quarterly,* Vol. XV, No. 2, October 1940, p. 174.

This is an excellent summary dealing with the place of music in colleges and universities of the country. The author is Head of the Conservatory of Music at Baldwin-Wallace College and for some time has held responsible executive positions in the National Association of Schools of Music. Recently he was selected to make a survey of the musical activities in the member schools of The North Central Association. The article is based on replies received from a questionnaire from 47 schools and will be supplemented and verified by personal visitation of a number of schools.

Before summarizing his findings, the author gives a brief history of the development of music study in higher institutions. The questionnaire deals with "Objectives of Music Education," "Administrative Responsibility for Outlining Purposes and Plans," "Courses Involved," "Buildings and Equipment," "The Library," "Provisions for Performance in Music," "Finances and Enrolment," "The Faculty," "Co-ordination with Other Departments," "Services to the Community and Innovations." The section on "Credits for Entrance and for Graduation" indicates that liberal arts colleges accept from none to five or six high school music credits for admission.

Elective courses in music applied toward the degree of Bachelor of Arts range from twelve semester hours of literature and theory combined with eight semester hours of applied music, to thirty-two hours of literature and theory combined with sixteen hours of applied music. The average amount of music allowed toward such a degree is approximately forty hours, which is the standard recommended by the National Association of Schools of Music.

"A New Admissions Plan," Cowley, W. H., *Journal of Higher Education,* Vol. XI, No. 7, October 1940, p. 345.

The report of this study is the first volume in a series of seven summarizing the survey of Hamilton College to be completed within three years. It deals with admissions and is quoted as being "by far the best and most searching analysis of the topic." It gives a review of the history of admissions, from the *laissez faire* period through the "unit system," to the present era of school and college co-operation. As a result of the study Hamilton College has voted to abandon the unit system and to select freshmen by stressing intellectual ability rather than pattern of required units.

The study is based on the significance of foreign language study. It was found that general ability as indicated by quartile standing predicted a student's success in college better than the number of foreign language units presented for admission, and data are presented to substantiate this result. The admission plan at Hamilton is therefore based on the student's score on a scholastic aptitude test, his class work in terms of college preparatory subjects, and a personal appraisal.

"The Professional Examination of Teaching Candidates": A report of the first annual administration of the National Teachers Examinations, Ryans, David G., *School and Society,* Vol. 52, No. 1345, October 5, 1940, p. 273.

In 1940 the American Council on Education's National Committee on Teachers Examinations and Co-operative Test Service examined 3,726 candidates in twenty-three centers in the United States. This article presents the details of the administration of the tests and summarizes the findings, illustrated by tables and graphs. This beginning in obtaining objective data on teachers will be continued when the second examinations are given March 14-15, 1941.

"College Degrees by Correspondence," Crider, Blake, *School and Society,* Vol. 52, No. 1349, p. 425.

The author reviews six institutions located in the United States that offer innumerable types of degrees through correspondence. The material is presented as found in the respective catalogs and lists qualifications of the faculty, courses offered, and estimated costs. One faculty member is listed as having an impressive array of degrees after his name: LL.B., J.D., Ph.D., D.Ps., D.M.J., D.Sc. A certain institution offers such degrees as Th.B., Ph.B., D.D., Ph.D., A.B., A.M., Ps.D., B.BA., Master of Laws and Doctor of Letters. In one school tuition for a major course giving a Ph.D. degree is fifty dollars, but there is a twenty per cent discount if the tuition is paid at the time of enrolment. Another article on the same subject, entitled "$100 Doctors," and written by Joseph Burton Vasché, may be found in *The Clearing House,* Vol. 15, No. 3, November 1940, on page 159.

"Selected List of NYA Publications," Whelan, Marion J., *Education,* Vol. 61, No. 2, October 1940, p. 107.

This is a list of 188 publications on the NYA, most of it obtainable through state NYA headquarters. It is arranged in four classifications: A. Industries and Occupations; B. Reports and Administrative Data; C. Guidance and Educational Methods; D. Circulars and General.

"Awarding Scholarships and Fellowships," Jones, Aaron E., *Journal of Higher Education,* Vol. XI, No. 8, November 1940, p. 427.

A study was made of the control and administration of scholarships and fellowships within the membership of the Association of American Universities. Data were obtained from official publications of the universities, the chairmen of the scholarship and fellowships committees, principals and high school seniors. There were 190 criteria for undergraduate and 163 for graduate recipients of awards, indicating the wide variation in administration. After summarizing the findings from the various sources of information, the author has listed sixteen criteria for evaluation of the programs. Some of these were: 1. Awards should be made to attract the most capable students and not to increase enrolment; 2. Good scholars should not be encouraged to sell themselves to the highest bidder; 3. All grants of aid should be confined to one year; and no assurance should be given of aid for more than one year, unless the grounds for the award still maintain; 4. Scholars and fellows should be selected on other bases than athletic ability, and athletic ability should count neither for nor against the applicant; 5. A uniform time for awarding scholarships and fellowships and for accepting the same should tend to prevent shopping around and should minimize the problem of schools, with larger awards depriving the smaller colleges of some of the best students.

"Want a Thesis Subject," Wesley, Edgar B., *Social Education,* Vol. IX, No. 4, April 1940, p. 235.

If any reader is interested in selecting a thesis topic in the field of the social studies, here is a list of 330 from which to choose.

"The Value of Intelligence, Personality, and Vocational Interest Tests in a Guidance Program," Alteneder, Louise E., *The Journal of Educational Psychology,* Vol. XXXI, No. 6, September 1940, p. 449.

This is a study giving the results of four psychological tests which were used as part of a guidance program for college freshmen. Three hundred students, men and women, took the various tests, which were: The Henmon-Nelson Test of Mental Ability for College Students, Form B; the revised Minnesota Paper Form Board Test, Form AA; *The Adjustment Inventory,* by Hugh M. Bell; and the Vocational Interest Blanks for Men and for Women Students, by Edward K. Strong, Jr. After giving the statistical results and summary of the application at the tests, the author outlines the situations in which the use of the respective tests will be helpful in a counseling program.

"New Tools for the Vocational Counselor," Kitson, Harry D., *Teachers College Record,* Vol. 42, No. 1, October 1940, p. 44.

Those who are interested in source material on vocational guidance will find this article of distinct value. It supplements material available since 1938, when a similar survey was published. Some of the sources specifically listed are books, radio programs, NYA studies, magazines and aids from vocational and federal agencies. The amount of new material obtained indicates that there will be increased demand for trained counselors to take care of the many agencies in need of guidance service.

"Graduate Education for Negroes in Southern Universities," Wesley, Charles H., *The Harvard Educational Review,* Vol. 10, No. 1, January 1940, p. 82.

The decision of the United States Supreme court concerning educational facilities for negroes in Missouri has focused attention on this question in general and especially in graduate and professional education. The question is becoming important because of the increase in negro attendance in elementary schools, secondary schools and colleges, and the demand for teachers capable of meeting certification requirements. All of these factors stress the demand for advanced degrees. The article outlines the procedures that are under way in the various states and educational institutions to provide opportunities and facilities for graduate work for negroes. These are: 1. the admission into state universities; 2. the development of graduate departments in the state colleges for negroes; 3. scholarships in privately controlled institutions for negroes within the state; and 4. cooperative action by facilities of universities for the maintenance of separate graduate courses for negro students outside of the state or private university.

BOOK REVIEWS

American Universities and Colleges, Marsh, Clarence Stephen, Washington, D.C., American Council on Education, 1940.

The 1940 edition of the Handbook of Higher Education is the fourth issued under the auspices of the American Council on Education. This volume doubtless offers more complete information concerning colleges, universities, and technical schools in the United States than any other similar publication. It is especially useful because of the categories into which the information is divided. Aside from the Annual Report on Enrolments and Degrees published by the American Association of Collegiate Registrars, there is no other source material on enrolments in and degrees conferred by colleges and universities which is as accurate and available as promptly as that furnished by the Handbook. Especially helpful is the classification of the departments and staff according to rank. It would be more convenient, however, to have the agencies by which various colleges are accredited included in the directory proper rather than in the appendix.

American Junior Colleges, Eells, Walter Crosby, Washington, D.C., American Council on Education, 1940.

The first edition of this publication is unusual because its organization is well planned, its classifications are complete, and its appearance is excellent. The information given for the institutions included is adequate and helpful, especially since the write-up for each institution includes the agencies by which it is accredited. This is quite useful to Senior Colleges when admitting transfers from Junior Colleges. The appendix contains helpful tabulations on curriculums offered by Junior Colleges. This is a publication which should be on the desk of every college registrar and admissions officer.

MILLARD E. GLADFELTER

Evaluating the Work of the School, Reavis, William C., Editor, University of Chicago Press, 1940, pp. vi + 236.

This stimulating and useful volume is a record of the proceedings of the Ninth Annual Conference for Administrative Officers of Public and Private Schools held by the University of Chicago's Department of Education. The main portion presents five groups of discussions, which consider the "nature and purposes of systematic evaluation," evaluation of instructional, administrative and supervisory services, of socializing functions of the school, and of a year-long program of evaluation. An appendix includes

a brief, selected bibliography and an outline for a "self-survey" of a school system.

The papers presented under the several topics are printed in their entirety as are the questions discussed in the several subsequent round-table conferences. These questions are invariably interesting, frequently provocative. Many would provide profitable material for faculty or staff meetings in any public school system or university school of education.

These papers are more than merely interesting. They are practical, concrete, and to the point. Moreover, in spite of the fact that there are fifteen separate contributors, representing four universities or colleges, two outside agencies, and five school systems in five different states, there is a remarkable community of thought and consistency of purpose running through the volume. The tenor is sanely progressive, but never ethereal. Problems are approached and discussed realistically.

Dr. Tyler sounds the keynote in the first paper, in which is discussed "The Place of Evaluation in Modern Education." Evaluation must concern itself not only with questions of statistical data and financial reports, he insists. Objectives must precede programs, and evaluation must determine validity of purpose and soundness of hypothesis. Evaluation must provide information "basic to effective guidance of students," information which allows the school staff to estimate the appropriateness of what is being attempted. Especially deplorable is the type of evaluation which measures only a portion of a program, as for instance progress in skill subjects or the extent of retardation, and then generalizes completely.

Dr. Wrightstone's paper (p. 12) describes many recently developed techniques for measuring or evaluating progress toward the "so-called 'intangible' objectives of instruction." While a more critical analysis of these tools would be desirable, the section is valuable. Many useful references are provided.

A number of practical applications of the principles enunciated by Tyler are found in the contributions by Herrick (p. 30), Jordan (p. 65), and Elicker (p. 160).

Buswell (p. 53) contributes an excellent discussion of "effective instruction." He insists that activity alone is not the basis of effective instruction, but rather activity which leads toward definite objectives. He draws a clear distinction between schools which "are like life," and schools which provide better opportunities than life outside can supply, and hence can be justified. He warns against slogan-worship. He speaks strongly with reference to school programs which lack "coherence in content" and schools which "helplessly adjust work to whatever . . . native interests turn out to be."

It is a vigorous and, in the judgment of this reviewer, an eminently sensible paper.

Sound in principle and useful in suggestion are Morgan's paper (p. 86) on measuring the effectiveness of teachers and Reavis' discussion of the self-survey (p. 131).

One of the most interesting and practical papers is the plan proposed for a "program of evaluation for a school year for the general improvement of" instruction, written by Philip Falk, of Madison, Wisconsin (p. 185).

First pointing out the fact that evaluation of instruction is nothing "new or mysterious," Dr. Falk briefly traces the progress of such evaluation from the days of routine techniques and analysis of "specific actions of the teacher" to the present emphasis upon results noticed in the pupil. Dr. Falk thinks clearly and writes well.

There are excellent treatments of other pertinent problems in this volume, but space does not permit individual comment.

Obviously, a volume of minutes is bound to be uneven. All of the contributions are not written with equal incisiveness or perspicacity. But not one of these papers fails to challenge the schoolman, not one strays from the subject. The book is a distinct contribution to current thought, not so much because what it says is particularly new, but because the analyses are clear, the applications practical; because it provides abundant food for thought.

J. Conrad Seegers,
Professor of Education,
Temple University

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FEBRUARY 7, 1941—Oklahoma Association of Collegiate Registrars, Tulsa
FEBRUARY 13-15, 1941—Rocky Mountain Speech Conference, University of Denver, Denver, Colorado
FEBRUARY 19-22, 1941—Progressive Education Association, Philadelphia, Pennsylvania
FEBRUARY 19-22, 1941—National Vocational Guidance Conference, Atlantic City, New Jersey
FEBRUARY 22-27, 1941—American Association of School Administrators, Atlantic City, New Jersey
FEBRUARY 27-MARCH 1, 1941—American Association of Junior Colleges, Chicago, Illinois
MARCH 12-14, 1941—Mississippi Education Association, Jackson
MARCH 14-15, 1941—Pacific Northwest Regional Guidance Conference of the National Vocational Guidance Association and the Northern California Guidance Association, Clairmont Hotel, Berkeley, California
MARCH 15, 1941—Mississippi Association of College Registrars, Jackson
MARCH 24-29, 1941—North Central Association of Colleges and Secondary Schools, Stevens Hotel, Chicago, Illinois
APRIL 3-5, 1941—Association of Texas Colleges, Dallas
APRIL 4, 1941—Alabama Collegiate Registrars Association
APRIL 7-9, 1941—California Conference of Secondary School Principals, Oakland
APRIL 15-17, 1941—American Association of Collegiate Registrars, Chicago, Illinois
APRIL 27, 1941—Northern California Guidance Association, Treasure Island, San Francisco
APRIL 27, 1941—Federated Business Teachers Associations of California, Bellvue Hotel, San Francisco

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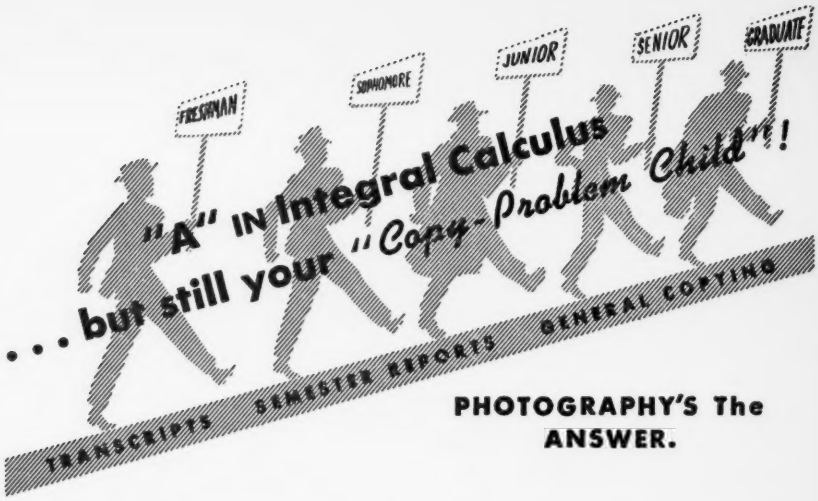

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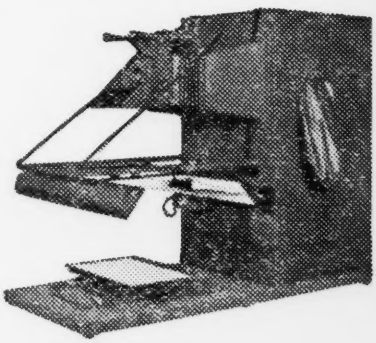

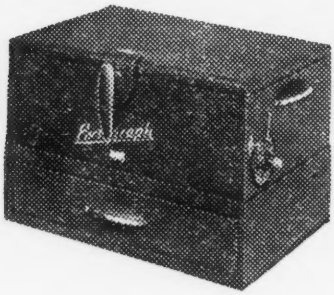

PORTAGRAPH

For smaller institutions where the volume of student records is more limited, Portagraph will produce about 40 or more picture-perfect copies of any record per hour. No dark room is necessary. Costs no more than a typewriter.

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